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ABSTRACT

Three papers were presented at three different conferences from 1990 to 1992: "New Ways of Meaning: A Challenge to Applied Linguistics," "The Act of Meaning," and "Language in a Changing World." Because each paper addressed a different audience, each addresses the topic of meaning and change from a different approach. The first paper summarizes the development of the field of applied linguistics and relates it to the view of the world and its development, suggesting that the things that affect humankind's ability to survive are not just problems for biologists and physicists, but must also be considered applied linguists. The second paper addresses the power of language as vested in the social, biological, political, logical, and historical acts related to meaning. Language is described as a means of access, ideology, metadiscourse, social inequality, and a model. The third paper deals with language and English literacy in the context of language education and the system of meanings inherent in different discourses in modern society. It is suggested that linguists should ask not only how to preserve these variations, but also how to make them a part of and a contribution to the future. Papers contain notes and/or references. (NAV)

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APPLIED LINGUISTICS ASSOCIATION OF AUSTRALIA

ED 397 693

Language in a Changing World

M.A.K. Halliday

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Language in a Changing World

M.A.K. Halliday

Emeritus Professor, University of Sydney
Honorary Visiting Professor, Macquarie University

Occasional Paper Number 13

Editor of This Volume

Richard B. Baldauf, Jr
National Languages and Literacy
Institute of Australia Limited
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Editor of Publications

Anthony Liddicoat
Department of Linguistics
Australian National University
Canberra ACT 0200

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FOREWORD

The three papers brought together in this little volume were presented over a period of two years and across a span of three continents: the first at the Ninth World Congress of Applied Linguistics (Thessaloniki, Greece; April 1990), the second at the Georgetown University Round Table on Languages and Linguistics (Washington, D.C., U.S.A.; April 1992), and the third at the Seventeenth Annual ALAA Congress (Sydney; July 1992). The first two are also published in the volumes of proceedings from those conferences; the last one appears here in print for the first time.

I have used the original title from the last paper, 'Language in a changing world', as the title for the monograph as a whole. This is partly because it seemed to capture well the motif which linked the three papers together (and I think of them as in some sense forming a trilogy); but also because that was the title of the paper given at ALAA and this is an ALAA publication. Since that particular paper is not appearing separately elsewhere this should not cause any confusion.

Because they were addressed to very different audiences, the three papers varied considerably in the way the topic was approached. The publishers also had different preferences regarding the style of presentation. There seems to me no virtue in trying to homogenise them; rather the contrary - I have never seen any reason why all the papers put together in one volume should conform to an identical style and format, and as a reader I enjoy a bit of variety. When you homogenise you usually have to move towards the so-called 'Harvard style', which is the one I am least happy with; and in any case, the more you rewrite or redesign the more errors are likely to sneak in. So I take full responsibility for the variation, and hope that the effect will not be found too unpleasing.

I take the opportunity of thanking the President of ALAA, Ross Steele, and the members of the Editorial Committee for making it possible to bring out these papers under the imprint of our Association.

Sydney, July 1993
M.A.K. Halliday

PREFACE

When I invited Emeritus Professor Michael Halliday to give the opening Keynote Address at the Seventeenth ALAA Annual Congress, he accepted with the gracious remark that as I had invited him and Ruqaiya Hasan, in their first year in Australia, to be Keynote Speakers at the Inaugural ALAA Congress, he would be delighted to speak at the final Congress which I would be convening as President of ALAA. In the intervening years, Michael had been a strong supporter of ALAA's activities, serving as a Vice-President of the Association and as Convenor of the World Congress of the International Association of Applied Linguistics in Sydney in 1987. When Michael, upon his retirement as Professor of Linguistics at the University of Sydney, requested to step down as Vice-President, ALAA paid tribute to his invigorating contribution to the development of applied linguistics in Australia by establishing and funding the M.A.K. Halliday Scholarships. These scholarships are now awarded annually by the Association to young researchers in Applied Linguistics.

The Keynote Address Michael gave at the 1992 ALAA Congress was the final paper in a series of three. The preceding two had been delivered at the Ninth World Congress of Applied Linguistics in Greece in 1990 and at the Georgetown University Round Table on Languages and Linguistics in 1992. So that applied linguists would be able to read the three papers in one volume, Michael welcomed my suggestion that I request reprint permission from the publishers of the two previous papers. I thank Professor Stathis Efstathiadis and Professor James E. Alatis for generously granting this permission and am very happy that all applied linguists can now read these three superb papers in this volume, Occasional Papers No. 13 of the Applied Linguistics Association of Australia.

Ross Steele
President of ALAA

I. NEW WAYS OF MEANING: A CHALLENGE TO APPLIED LINGUISTICS *

In 1984 in Brussels, Francisco Gomes de Matos opened the Seventh World Congress by reviewing the history of previous congresses and assessing how far in those twenty years applied linguistics could be said to have progressed towards maturity. He referred to the first one in the series, the Premier Colloque International de Linguistique Appliquée held at Nancy in 1964; and noted the doubts then expressed by the organisers about holding a colloquium devoted to applied linguistics.[1] Rereading the preface to that Nancy volume, by Bernard Pottier and Guy Bourquin, I was struck by what they had selected as the initial theme, that of 'semantic information':

> l'information sémantique en linguistique et en traduction mécanique

- to which, with some hesitation, they had added another, that of foreign language teaching:

> nous avons . . . risqué l'entreprise, en adjoignant au thème initial celui de la pédagogie des langues vivantes: . . .

This, they explained, was why the book seemed to lack unity:

> d'où l'incohérence apparente du contenu de ce volume.[2]

Those times have changed. In Sydney, at the Eighth World Congress in 1987, out of 548 papers submitted for consideration about one half were on some aspect of second language teaching and learning; while the 'initial theme' from the Nancy colloquium was hardly represented at all. Very soon after Nancy, machine translation largely disappeared from the academic scene in western Europe and North America; meanwhile 'semantic information' was shifted to the domains of computational linguistics and artificial intelligence, and these had their own international forums and events. It is quite natural that our efforts should constantly be regrouped into new and different formations. We have already seen

the generalised concept of educational linguistics emerging during this time. We have not yet reached a comparable stage with clinical linguistics; this has still not become a unified concept, although there are major achievements in particular areas, and the theoretical base in neurolinguistics is certainly gaining strength.[3] And the other major area that has developed during the period is that of language policy and planning. At the same time, however, it is noticeable that with all the varied activities that go on under the name of applied linguistics we have still not really achieved a transdisciplinary perspective. I say 'transdisciplinary' rather than 'inter-' or 'multi-disciplinary' because the latter terms seem to me to imply that one still retains the disciplines as the locus of intellectual activity, while building bridges between them, or assembling them into a collection; whereas the real alternative is to supersede them, creating new forms of activity which are thematic rather than disciplinary in their orientation.

A discipline is defined according to its content: what it is that is under investigation. The study of life forms, for example, constitutes the discipline of biology; and such disciplines split up into taxonomies as their domains become more and more subdivided: first biology, then zoology, then invertebrate zoology, entomology and so on. A theme, on the other hand, is defined not by content but by aspect, perspective or point of view. Perhaps the earliest theme to emerge in European scholarship was mathematics. If I measure anything systematically I am doing mathematics; it does not matter what it is that I am measuring. The 'content' of mathematics does not exist in the material world; it is created by the activity of mathematics itself and consists of ideal objects like numbers, square roots and triangles. In the nineteenth century, history became transformed into a theme, in the form of evolution: any phenomenon could be studied from the standpoint of how it evolved. The twentieth century then countered this with the theme of structuralism: any phenomenon studied from the complementary standpoint of how it is organised and held together. This gave us our sense of language as 'un système où tout se tient',[4] to use Meillet's famous phrase that Firth so vigorously objected to. Sometimes the theme may appear without its name being taken up, like cybernetics for phenomena considered as circular, self-regulating systems; or more recently cladistics, for phenomena studied from the standpoint of how they change, whether by

evolution, by growth or by individuation. (Perhaps the names did not stick because their Greek origins were not widely recognised? - I had to look up kládos myself to find that it meant 'a young slip or shoot broken off', especially a small branch of an olive tree.) For students of language it seems to me that the most important theme to emerge in this half century has been semiotics: any phenomenon investigated from the standpoint of what it means - anything considered as information, if you prefer. Not everyone likes the associations of this term - I myself do not accept the implication that the study of meaning must be grounded in some theory of the sign. But it serves to make explicit the perspective that some of us try to adopt, not only towards language but towards other human activities as well.

We have recognised for a long time that activities such as teaching a foreign language involve more than the content of any one discipline: at the very least, they involve psychology and sociology as well as linguistics. Our academic courses - M.A. in Applied Linguistics, and its equivalents in other educational systems - have always been interdisciplinary in this sense. Now I am not suggesting that such programmes can be underwritten by a single theme, any more than they can be by a single discipline; they are much too complex and manysided to be looked at from any one perspective alone. But I think in the future such activities will benefit as much from the complementarity of different themes as from the summation of different disciplines. Our practice as language teachers depends more on our being able to adopt the complementary perspectives of two conflicting themes, that of 'learning' and that of 'meaning', than on putting together pieces from linguistics with pieces from psychology and sociology. The reason learning a foreign language can be extraordinarily difficult for an adolescent or adult who has not grown up multilingual is that there is a real-life contradiction between these two modes of processing language: that of learning it for future use, and that of using it. They can no longer both learn language and 'mean it' at the same time. The teacher cannot resolve this contradiction, but has somehow to transform it from a constraint into a condition which enables, and even enforces, the learning process.

Another activity that has become a major concern of applied linguistics - and which is no less complex, as regards the themes that are involved, than language teaching - is that of language policy and

planning. I do not know at which of our congresses this first emerged as a separate section; there were 31 papers in the proceedings of this section at Brussels, as well as references to language planning in papers of many other sections, and we have had a Scientific Commission in this field from the start. Language planning is a highly complex set of activities involving the intersection of two very different and potentially conflicting themes: one that of 'meaning', common to all our activities with language, and other semiotics as well; the other theme, that of 'design'. If we start from the broad distinction between designed systems and evolved systems, then language planning means introducing design processes and design features into a system (namely language) which is naturally evolving. This is bound to be a highly complex and sensitive task.

The greater part of language planning activity is institutional rather than systemic. That is to say, it has to do with planning not the forms of a language but the relationship between a language and those who use it.[5] The main issues are what languages to use for what purposes in the community and how to ensure that people in the community have access to the languages they want. This aspect of language planning involves formulating policies, getting them adopted, and making provision - primarily educational provision - for ensuring that they are carried out. These measures provide, in their turn, the institutional context for work in second language teaching; and also for work in mother tongue teaching for purposes of language maintenance and vernacular literacy.

They also provide the context for language planning of the systemic kind; in which the aim is to design the language itself, so as to expand its potential for meaning. Typically this kind of planning is undertaken when a language is being developed for use in new registers - new functional contexts in which it has not previously served. Almost always the main effort is directed towards expanding the *lexical* resources: planning consists in establishing principles for the creation of new terms, and applying these principles so as to develop systematic technical taxonomies in specific registers defined by field, or discipline. An example of this is the development programme for Swahili, as reported by S.J. Maina of the Kiswahili Council of Tanzania.[6] Discussing the enrichment of Kiswahili, Maina notes that 'much of the effort is being specifically directed towards enrichment of Kiswahili terminology'. He

refers to the 'three main processes [generally] used for the enrichment of terminology in a language', namely compounding, derivation and borrowing; and gives examples from Swahili of all three, specifying the types of compounding and derivation that are used and the sources of borrowed words. The policy context for this work is Kiswahili as a medium of instruction: Maina notes that 'there is a definite move towards the adoption of Kiswahili as a language of instruction in Secondary Schools'.

Maina also notes some of the objections that have been raised, mainly to new terms whose taxonomic relationship is obscure (e.g. the words suggested for *hydrophily*, *hydrophyte* and *hydrotropism* have no common element corresponding to the *hydro-*); and some of the difficulties that arise with compounds that 'carry a heavy semantic load' but which are not yet felt as single words. 'A high frequency of usage will hopefully make users forget looking at the components of the words and accept the single lexical unit.'

If we now turn to the grammar, then apart from the grammatical processes involved in the formation of new words, which may need minor adjustment, very little attention in language planning is devoted to developing the grammar of the language. Not that the planning agencies neglect grammar; but the effort here is directed towards standardisation and the correction of errors, not to the development of new grammatical patterns. This naturally raises the question: why? - or rather, why not? Why does enriching the language not connote also the enrichment of the grammar? The answer, presumably, would be either that it is not necessary or that it is not possible; or perhaps some combination of the two, such as that it would be desirable but is too difficult.

To say that the grammar is not planned means that no-one intervenes in its evolution by design. It does not imply that no grammatical changes take place; they clearly do. Newspapers in countries with rapidly developing languages frequently carry complaints that the language does not read like itself any more; it reads like English, or whatever is the predominant external source. Typical examples given are various kinds of 'voice' pattern: that is, clause types analogous to passives, derived equatives (clefts and pseudo-clefts) and so on, which function to distribute the balance of information in the clause, along lines comparable to Theme+Rheme and Given+New in English. It is hard to

say whether the patterns that seem alien to the speakers of the language have been 'borrowed', by loan translation, or have been 'coined' in the language itself; that line is virtually impossible to draw. Since the contexts in which they are used are contexts that are already associated with English (science and technology, bureaucracy and administration), and since their discourse functions are already defined in English discourse, such patterns will tend to seem English (that is, foreign) anyway, whether or not the forms themselves bear any great resemblance to English syntax. It is the overall semantic style that seems imported.

But whether or not it is possible to trace the *source* of particular changes, there may be significantly different views on what underlying general *processes* are taking place. Let me try and summarise these views in their canonical forms, recognising that those who incline towards one view or another would often hold some modified version of it. One view would be that all languages are the unchanged products - unchanged, that is, except on the surface - of a semantic development that took place early on in human history, determining the overall structure and content of the semantic system, which is therefore universal to all humankind. The grammar is the arbitrary, or conventional, representation of a pre-existing reality, or a pre-existing cognitive model of such reality. Of course, new things are constantly being created, new objects, institutions and abstractions, and these get names; but naming new things (in this view) does not by itself perturb the semantic environment - hence if new grammatical forms arise in the course of technical development, they have been borrowed. In this view the lexicon is kept clearly distinct from the grammar, and the grammar is concerned only with ideational meaning, interpersonal functions being excluded. Enriching a language, in this view, means creating new terms which operate, or could operate, within existing contexts of use. I think Labov's perspective would be fairly close to this one.

A second view would be that language is continually evolving, and that this includes the semantic system, which is not constant for all times and places but differs from one time and one place to another. The material and non-material conditions of a culture are reflected in the grammar of its language, which is not arbitrary; when these change the language changes in response. The language thus optimises itself in relation to its environment; new forms will arise when called for - they

do not need to be borrowed. An explicit version of this view was articulated by N.Ya. Marr and his associates in the Soviet Union in the 1930s and 1940s, based on a simplified Marxist interpretation of history, with language as part of the superstructure erected on the economic base; language changed through stages, or 'stades', corresponding to primitive communist, slave, feudal and capitalist modes of production. As an example Marr cited the ergative structure in transitivity, which he thought reflected a way of explaining phenomena arrived at before an understanding of causality had been reached.[7] Put in more general terms, this view would hold that language reflects reality through the intermediary of human cultures; hence in the long run the grammar changes in response to the patterns of cultural change, even if the process is a very gradual and indirect one.

There is obviously much room for intermediate positions between these two extremes. But there is also a third view which is different from either of them: the view formulated by Whorf, following on from Sapir, and also, against rather different intellectual backgrounds, by Hjelmslev and by Firth. In this view language does not passively *reflect* reality; language actively *creates* reality. It is the grammar - but now in the sense of lexicogrammar, the grammar plus the vocabulary, with no real distinction between the two - that shapes experience and transforms our perceptions into meanings. The categories and concepts of our material existence are not 'given' to us prior to their expression in language. Rather, they are *construed* by language, at the intersection of the material with the symbolic. Grammar, in the sense of the syntax and vocabulary[8] of a natural language, is thus a theory of human experience. It is also a principle of social action. In both these functions, or metafunctions, grammar creates the potential within which we act and enact our cultural being.[9] This potential is at once both enabling and constraining: that is, grammar makes meaning possible and also sets limits on what can be meant.

I shall adopt this third view: that our 'reality' is not something ready made and waiting to be meant - it has to be actively construed; and that language evolved in the process of, and as the agency of, its construal. Language is not a superstructure on a base; it is a product of the *conscious* and the *material* impacting each on the other - of the contradiction between our material being and our conscious being, as antithetic realms

of experience. Hence language has the power to shape our consciousness; and it does so for each human child, by providing the theory that he or she uses to interpret and to manipulate their environment.[10]

But, by the same token, since language evolves out of the impact between the material and the conscious modes of being, it follows that as material conditions change the forms given by language to consciousness also change. Grammar construes reality according to the prevailing means and relations of production - or what we wrongly call 'production' (I shall return to this at the end). But these are not constant; they have *evolved* through different forms at different times and places. The meaning-making potential of language - the grammar, in our current sense of the term - has evolved along with them. It is also not the same throughout the courses of human history.

But the relationship of the grammar to these changing material conditions is an extremely complex one. Semogenic processes - processes of constructing meaning - cannot be understood *outside of* their historical contexts; but neither can they be *derived from* these contexts by any simple relation. Let us put it this way: language is at the same time a part of reality, a shaper of reality, and a metaphor for reality. Once any form of language - any grammar - has come into being, it participates itself in the shaping of historical processes, including those which constitute the means and relations of production. First, as a part of reality it makes it possible for people to coordinate material practices and it constructs the social relationships that go with them. Secondly, in enabling these forms to evolve it also, as the 'construer' of reality, both ensures and at the same time constrains their evolution into something else. Language constrains their evolution because the reality that the grammar enacts is that of the prevailing socioeconomic order; hence language will tend to be conservative - the way things 'are' *is* the way they are. But it ensures that the forms will evolve, because the grammar can never be either fixed or monolithic; it also contains all the prevailing contradictions and complementarities, both those that exist *within* the material, socioeconomic domain, and those that inhere in the impact that engendered language in the first place, that *between* the material domain and the conscious one. And so, thirdly, as a metaphor for reality language re-enacts, simultaneously, in its own internal system-&-process, through multiple fractal formations, the various contradictions and complementarities that it imposes on the reality that it is construing.

So while any language can create new names overnight, its semantic base - what Stalin, in demolishing Marr, called its grammatical system and basic lexical stock - under typical conditions[11] change only very slowly. The mechanism of such change has to be sought in the dialectic between the *system* and the *instance*.[12] But such change is not random (here Marr was right): it is a function of changes in the material conditions of the culture. The history of language is *part* of human history; it is not some mysterious surrogate process that goes bubbling along on its own. Thus major upheavals in human history are also linguistic upheavals. Grammar, since it is internal to language (not located at either material interface), can to a certain extent 'take off' on its own; but since it is the powerhouse for construing experience there can never be a total disjunction between the symbolic forms and the material conditions of their environment.

What are the major upheavals in human history that seem to have also been critical in what we might call semohistory? One is, almost certainly, settlement: the gradual transition from moving around after food to staying in one place and raising it. A second is probably the 'Iron Age' of classical Greece, India and China - although these two could be seen as the initiating aspect and the culminating aspect of a single complex transition. A third would be the so-called 'renaissance' in Europe, culminating in the industrial revolution. And we should now add a fourth, namely the present: the move into an age of information, if you like, although we may need to think of it in rather different terms. Let me try to focus on these as changes in the semiotic construction of reality: not seeing them in terms of any of our western ideological constructs - neither with eighteenth century 'fall from grace' romanticism, nor with nineteenth century 'all for the better' progressivism, nor with twentieth century 'nothing ever changes' ostrichism; but recognising that they were transformations in the human condition which took place in some places and not others, among some peoples and not others, for a variety of complex historical and geographical reasons. There was nothing inevitable about them; rather, they arose as a potential which on some occasions was taken up.[13]

A significant component in these historical upheavals, I am suggesting, is a change in ways of meaning. (1) With settlement, the shift from hunting and gathering to pastoral and agricultural practices, there

developed a new semiotic mode, namely writing; but the importance of writing lies in the grammar that develops along with it. This is a grammar in which *things* are construed as commodities; they take on a value, and can be itemized and drawn up in lists. This work is done by the nominal group: nouns are measured into quantities, they are assigned qualities along various scales, and organised into taxonomies of classes and sub-classes. It is also a grammar in which social relations are transformed into institutions. But the main source of *abstract* meaning seems to shift from the interpersonal towards the ideational - from, for example, the rights and duties of kinship to generalisations about the phenomena of experience;[14] and within the ideational, from processes towards things. This shift into 'settlement' semantics is of course masterminded by the grammar; but it is also constituted iconically by the shift into the written medium, whereby discourse itself becomes a thing and the abstractions - the written symbols and their arrangements - are transformations of processes into things. It is important to stress, however, that writing is not a cause; we are not talking about causal relationships but about realisational ones, whereby in the impacting between the material processes and the processes of human consciousness the grammar construes the reality of a settled agricultural existence, in which activities lead to products, and the space-time flux of experience is overlaid by constructions of objects having fixed location in space. Overlaid, but not obliterated: the pre-settlement grammar is still there in the language - but it is no longer the predominant mode of meaning. We could perhaps give an analogy with the history of a late twentieth century individual: in the course of learning to read and write, the child takes on the grammar of the primary school, with its different construction of meanings - but the grammar of home and neighbourhood is still there underneath it.

(2) In the classical, iron age culture of the Eurasian continent, the grammar became further transformed, taking up and expanding those options by which phenomena became 'objectified', so that other domains of experience, hitherto construed as process-like, could be modelled in terms of things. As techniques evolved into technologies, discourse too became technical: the grammars of ancient Greek, Chinese and Sanskrit construed processes and properties as nouns, like 'movement', 'force', 'change', 'volume', 'line'; and created long mathematical nominal groups, like this one from Aristarchus of Samos:

> The straight line subtending the portion intercepted within the earth's shadow of the circumference of the circle in which the extremities of the diameter dividing the dark and the light portions of the moon move . . .

- all of which is merely the Subject of the clause.[15] If we continue the educational analogy, these are the ways of meaning the student will meet in the middle school, where educational knowledge becomes technical and the disciplines begin to emerge. (3) Then, with the 'advancement of learning' that led to what we, in the West, were brought up to think of as the 'modern' age, the grammar was restructured once again, this time through a *metaphorical* upheaval which resulted in the kind of language now used at congresses of applied linguistics, or indeed at congresses of all kinds and in many other contexts as well. Reality has been reconstrued in the learned, bureaucratic and technocratic mode that we are all so familiar with today; for example,

> What we seek is a capability for early initiative of offensive action by air and land forces to bring about the conclusion of battle on our terms.

- naively, we want to be able to attack first to make sure we can win.

It would be a gross oversimplification to present all our semohistory as a relentless march towards what one might call 'thinginess'. The semiotic processes involved are highly complex, and they lead to syndromes of all kinds of features which coexist in coteries, complementarities and contradictions. Moreover the grammar of every language is a mix of semiotic modes, whether or not it has been through these various upheavals. But the particular mix that characterises the elaborated tertiary styles of the Eurasian world languages, from Japanese and Chinese at one end of the continent to English, French and Spanish at the other, is the result of the layering, one on top of another, of all these various 'moments' in their history through which experience has been ongoingly reconstrued in successively more abstract and objectified terms.

I hope by now we are beyond the point where we have to pretend that everybody's world view is alike, just in order to protect ourselves from a foolish accusation of prejudice by those who cannot distinguish

between 'different from' and 'better (or worse) than'. The task for applied linguistics here is to *interpret* the grammatical construction of reality: to use our theory of grammar - let us call it our 'grammatics' - as a metatheory for understanding how grammar functions as a theory of experience. This means taking account both of those features that are apparently found in all languages, and so constitute the construction of the essential human experience, and those that are specific to particular forms and phases of the human condition.

It is a difficult task, which tends to get pushed off the agenda because it is so hard to do and so easy to decry. Let us try and locate ourselves somewhere in between two extreme opposing points of view. One extreme would be: all grammatical patterning, whether invariant or varying between languages or within one language, is random and arbitrary, and has no bearing whatever on how people interpret experience. At the other extreme would be the view that all grammatical patterning, invariant or varying, contributes directly to the construction of reality. Now, everything we know about language, and also about other human systems, suggests that neither extreme is likely to be valid: we should expect that some kinds of patterning will be relevant but not all, and some kinds more relevant than others. Two criteria suggest themselves. One is that such significant semantic effects will be achieved not by any single grammatical features, but only by syndromes, assemblies of features from different parts of the grammar which typically co-occur, in part reinforcing each other and in part contradicting each other, but constituting as a whole a distinctive meaning style. The other criterion is that such features are likely to be covert rather than overt; they will be found among the cryptotypic patterns of the grammar which typically remain beyond the limits of our conscious attention. Only the interplay of diverse semantic forces, largely hidden from view, would be powerful enough to slant us towards one rather than another among the 'possible worlds' into which our experience could be construed.

If we look at the world as a whole it is clear that different reality constructions can and do coexist. There are a few communities, now highly at risk, whose meaning styles are those of a hunting-gathering, non-settlement culture; there are large areas of peoples who mean in a settled but non-urbanised, agricultural mode; and a fairly massive portion of the globe dominated by industrialised, urban semantic patterns. These

groups are not insulated from one another; there is constant mixing and interpenetration of the different modes. We cannot work with the traditional disjunction between sociology and anthropology, or its counterpart in literacy theory, according to which there are two human populations, the writers and the non-writers, with a clear dichotomy between them. Rather we should envisage a multidimensional space within which human beings construe experience, with certain regions within that space being taken up preferentially by different groups to resonate with the different conditions of their material existence.

But since these conditions were in fact ordered in time - thus the industrial age followed the agricultural age and not the other way round - there is an implicational scaling here: a settlement grammar has evolved through a non-settlement grammar, but not vice-versa. Hence the layering of meaning styles referred to earlier: the different models of reality coexist within one language, features of the earlier phase persisting in very much the same way that features of the earlier material conditions continue to be part of the total experience. (A word of caution here. It is important not to be seduced by the analogy of the individual mentioned earlier. The individual child may, up to a certain point, recapitulate the history of the semantic system as he moves through primary, middle and tertiary education. But this pattern of change is one of growth, not one of evolution; if we say the earlier phases 'persist' this is in a very different metaphorical sense.) But if different models of reality coexist within one language, what is to ensure that every group takes up the same set of options, construing their experience according to the same semantic priorities? The person who put this question on the agenda was Basil Bernstein, who showed that within our Western societies there were in fact distinct modes of meaning by which the two major social classes construed reality - and that while the members of the working class typically selected for one mode, those in the middle class did not just select for the other but ranged over both. This is just the pattern we should expect if the two modes derive from different phases in the evolution of the system. This is not to suggest that Bernstein's 'restricted code' is the language of pre-industrial societies; that would be absurd - and in any case impossible, given the nature of evolutionary change. What it is saying is that the forms of discourse that Bernstein identified under the heading of restricted code (notably the orientation towards the particular

in ideational meanings and towards the implicit in interpersonal meanings) constitute semantic styles which, while continuing to evolve, have not taken up the specific options that construe experience according to the changed conditions of late capitalist society - as it is construed, that is, by those who orchestrate the changes.

Bernstein ran head-on into the greatest disjunction of all: that a class-supported culture cannot admit the reality of social class. He was vilified from all sides, his professional standing arraigned; even today he is being labelled 'class chauvinist', by people who have never read what he wrote and, to their shame and disgrace, will casually (that is, in a 'to be taken for granted' manner) guillotine a scholar who dares to break their sacred taboos. What Bernstein understood was that, given a single grammar, the potential of that grammar can be taken up in consistently different ways by different groups of people, selecting with different probabilities in the same system and so in effect construing different forms of social relationships and different models of experience. Bernstein's original and very practical concern was to show how one of the two groups was consistently disfavoured by this process - a semiotic process which turns out to be the fundamental mechanism by which oppressed groups in society contribute to the status quo of their own oppression.

Since we cannot quantify 'same or different', it is largely a matter of our own angle of approach whether we say that restricted and elaborated codes, or coding orientations, construe different realities, or the same reality seen from different ends. What we need to recognise is that, while the *system* of the language construes the ideology of society as a whole, the *development of resources within the system* differentiates among different groups within a society. There is nominalisation in both codes; but that in the elaborated code is both more abstract and more general, and abstraction times generalisation equals power. There is grammatical metaphor in both; but that in the elaborated code tends to be ideational, that in the restricted code interpersonal - and ideational metaphor equals power. The elaborated code is not merely the code in which the genres of power are written; it is the code in which material and social reality are construed from the standpoint of those who dispose of it.

One of the few of Bernstein's contemporaries who understood what he was saying was Mary Douglas, who saw that he was (as she put it)

'cutting the middle classes down to size'. But Bernstein's linguistic data base was limited, and it is only now that we have a large-scale study where it is shown by systematic linguistic analysis, clause by clause, of over 20,000 clauses (the full sample is three times as large) that he was right. Ruqaiya Hasan, in her study of the natural conversations that take place between mothers and their three-year-old children, has demonstrated that in an Australian urban society there are systematic and regular semantic differences in the way mothers talk to children, according to two social factors: one, the sex of the child, and two, the class of the family.[16]

Now everyone recognises - well, perhaps not yet everyone; but very many people recognise - that the resources of the grammar as they are typically deployed in the discourse of settlement languages construe the world from the angle of the male, whether in encoding social norms, in naming and addressing, in assigning transitivity roles or a variety of other such enactments.[17] We have a Scientific Commission on Language and Sex to deal with the situation (and note in this connection that it is *assumed* that by working on the language you can change social reality, which makes sense only if you accept that reality is construed in language). But why have we no Scientific Commission on Language and Class? When Hasan shows that mothers of boys use a different code from mothers of girls, she is praised for having added a new dimension to our understanding of language and sex. When she shows by the same linguistic techniques that working class mothers use a different code from middle class mothers, she is criticised on the grounds that there are no such things as social classes, and (somewhat self-contradictorily) that anyway mothers and children do not belong to them. It is not difficult to see why, although the explanation may sound very obvious. It is acceptable to show up sexism - as it is to show up racism - because to eliminate sexual and racial bias would pose no threat to the existing social order: capitalist society could thrive perfectly well without sex discrimination and without race discrimination. But it is not acceptable to show up classism, especially by objective linguistic analysis as Hasan has done; because capitalist society could not exist without discrimination between classes. Such work could, ultimately, threaten the existing order of society.

If language merely 'reflects' our experience of what is out there, by correspondence with the categories of the material world, it is hard

to see how we could threaten or subvert the existing order by means of working on language. But this is what we are doing when we plan the grammar in order to combat sexism. That this makes sense is because language does not correspond; it construes. We are not easily aware of these affects because they are quantitative and gradual; and, as Paul Ehrlich has pointed out, as a species we are not biologically predisposed to recognise and respond to gradual effects, and the 'innumerable small momenta' so aptly labelled by Whorf. We recognize and respond to catastrophes; but the evolution of meaning is not usually catastrophic (except when a Shakespeare or a Newton comes along), and we do not naturally attend to the steady, infiltrating linguistic processes by which our ideological constructions are put in place.

For the same reasons, it is hard to illustrate these effects from text examples; if we represent them *instantially*, we need very large samples of discourse to bring them out. By the same token, however, we can represent them *systemically* – as a feature of the system rather than an instance. (That is, as langue rather than parole – except we have to first deconstruct that dichotomy, in order to show that they are not distinct phenomena, but complementary aspects of the same phenomenon.) Let me cite two examples of meaning construction from the Eurasian culture band which did not participate in the original western shift to capitalism and industrial technology: Urdu, and Tagalog. Hasan has shown that Urdu has many 'implicit devices': that is, grammatical contexts in which no reference is made to the entity (person or thing) that is involved in a particular process because the context of situation makes it clear.[18] Taken by itself, this could be an arbitrary fact of grammar; the significant point is, however, that Urdu speakers positively favour the 'implicit' option wherever it is available. To be an Urdu speaker 'is to believe that your addressee knows what you are on about; it is to assume that the chances of ambiguity are so low as to be almost negligible'. The listener can construe the text because of participating in the same culture, in which so much is taken for granted about social relationships and about possible roles. And this brings out the dialect between the system and the instance: the grammar provides the potential, the systemic options, for implicit reference; these options resonate with the prevailing patterns of the culture; they are taken up as the most frequent options in everyday discourse; this feature is thus reinforced as part of the grammatical

system. Thus the instances constitute the system, and the system defines the potential for each instance.

In the grammar of Tagalog, Martin identifies three key motifs that are critical for the cultural construction of reality - he refers to them as 'grammatical conspiracies'; these are the motifs of face, family and fate. For each of these Martin presents syndromes of features that 'conspire' to construe experience and enact social relationships in certain ways which he then contrasts with comparable features in English. Thus in the *family* motif, 'the basic theme . . . is that of 'togetherness': doing things together or having things in common'. Martin relates this to Hasan's 'taking things for granted' in Urdu, identifying ten features in the grammar which collectively construct togetherness; and contrasts it with English grammar's construction of individuality. *Face* 'has to do with appearances: respecting other persons' positions, possibly at one's own expense'; this 'appearance' is contrasted with the English orientation to 'reality', and is construed by a further ten grammatical features. The 'basic theme of the *fate* conspiracy is that of events taking place outside of an individual's control - things simply happen; one cannot really determine one's fate'. Martin finds nine features sustaining this 'fatalistic' construction, and this he contrasts with the 'deterministic' construction of English.[19]

The kinds of meaning style described by Hasan and by Martin tend to be characteristic of cultures where the members are closeknit and homogeneous, and share many of the same assumptions and values. It is an extension of family language, a semantics for contexts where only a small proportion of one's total discourse would involve interacting with strangers. Of course this kind of discourse occurs among speakers of English too; and presumably in every language in the appropriate interpersonal contexts. But what Hasan and Martin are saying is that this cultural reality is actively constructed by regular and systematic features of the grammar of the languages concerned. And here we find a significant contrast with English. Mathesius had already drawn attention over fifty years ago to certain changes that took place in Late Middle/ Early Modern English, coinciding with the spread of printing and hence with the cultural upheaval of the renaissance. These seem to make up a syndrome which, interpreted in systemic terms, realigned the metafunctional priorities as between the textual and the ideational

elements in the structure of every clause.[20]

Following up Mathesius' observations we can identify certain features entering into this 'conspiracy', for example: (i) the shift from the bonding of Subject with Actor to the bonding of Subject with Theme, e.g. *I was accosted by a stranger* rather than *a stranger accosted me* or *me a stranger accosted*, leading to much more frequent use of the passive voice; (ii) the shift from mental process forms *methinks, melikes* &c. to *I think, I like*; (iii) the proliferation of phrasal verbs, with a shift from *I'll raise the matter* to *I'll take the matter up*, from *how can we solve this equation?* to *how can we work this equation out?*, getting the verb at the end of the clause; (iv) the pairing of expressions like *take the tailor this cloth* and *take this cloth to the tailor*, or *play the devil at cards, play cards with the devil*, where the difference has nothing to do with the transitivity functions (the part played by *the tailor, the devil* in the *process*, which is the same in both variants) but signals different roles in the information structure of the clause; (v) the spread of thematic equatives ('clefts and pseudo-clefts') permitting any distribution of the elements of the clause into thematic and informational values. All these patterns conspire to construe the discourse first and foremost in terms of Theme+Rheme and Given+New, with one element clearly signalled as Theme at the beginning of the clause and the main item of news having an unmarked location at the end. And there are other features associated with these in rather deep and complex ways; for example the shift from *dined, nodded, sounded, erred* to *had dinner, gave a nod, made a noise, made a mistake*; from *her hair is long, my arm is broken* to *she has long hair, I have a broken arm*; and the predominance of verbs displaying the ergative-type voice system, such as *the door opened/she opened the door, a new method evolved/ they evolved a new method, he never changes his ideas/his ideas never change*. These features evolved as part of the newly emerging standard spoken English; and they lead to a form of discourse in which the dominant patterns in the grammar, in the sense of those which determine primarily what options are taken up, are the *textual* patterns of theme and information rather than - or at least as much as - the *ideational* patterns of transitivity. In other words, the ways of meaning of the listener are precisely *not* taken for granted. This kind of discourse can be spoken to a stranger, who shares neither the norms of interaction nor even necessarily the context of situation; likewise it can be written in a book that is going to be printed in multiple copies. These are the things a

standard language is for; and they need a grammar in which the organization of the message, and the information value of each of its parts, will *typically* be rendered explicit.

At the same time as this general, non-technical grammar was settling in place in English there were evolving in the major languages of Europe (among which English was emerging as one) the new technical registers of science and of learning, destined to form the leading edge in construing the new reality. Both in the Italian of Galileo and in the English of Isaac Newton we find more or less identical syndromes of grammatical features constituting the semantic character of scientific discourse. Let me enumerate the most important of these, drawing for Galileo on the work of Maria Biaggi.[21]

1. *Abstract* nouns as *technical* terms, from ancient Greek via classical and medieval Latin:

velocità, mutazione	incidence, proportion

2. *Metaphorical* nouns as nominalisations of processes and properties, *non-technical*:

il toccamento dell 'acqua con la barca	the diverging and separation of the heterogeneous rays

3. Nominal groups expanded with *words* functioning as *Epithet* and *Classifier* (pre-Head in English, post-Head in Italian); such words often derived from processes and properties by 2. above:

il moto generale diurno	several contiguous refracting Mediums

4. Nominal groups expanded with *phrases* and *clauses* functioning as *Qualifier* (post-Head in both languages); such phrases and clauses often derived likewise from 2. above:

il mobile cadente lungo il piano	the Whiteness of the emerging Light
quegli animaletti volanti con pari velocità	the Motion of the Ray generated by the refracting Force of the Body

5. *Metaphorical* verbs as verbalisation of logical relations ('causes'. 'proves', 'follows' &c.):

   risulta da, succede arises from, is occasioned by

6. Ways of chaining abstract participants through the text.

7. Long hypotactic and paratactic clause complexes, especially in the description of experiments.

The last two would require long passages of text for their illustration. But the following short extract from Newton [Opticks, p.282] will exemplify a number of the features listed above:

> In this Proposition I suppose the transparent Bodies to be thick; because if the thickness of the Body be much less than the Interval of the Fits of easy Reflexion and Transmission of the Rays, the Body loseth its reflecting power. For if the Rays, which at their entering into the Body are put into Fits of easy Transmission, arrive at the farthest Surface of the Body before they be out of those Fits, they must be transmitted. And this is the reason why Bubbles of Water lose their reflecting power when they grow very thin; and why all opake Bodies, when reduced into very small parts, become transparent.

Neither Galileo nor Newton was inventing new forms of language. Probably all the grammatical features of their discourse already existed in Italian, or in English. What they did was to reconstruct the probabilities of the system; and in doing so, to create a new register - not alone, of course, but in conjunction with others taking part in the activity of science. This carried still further the trend towards thinginess that had started in ancient times. But while evolving as clearly distinct varieties, they were in no way insulated from other forms of the standard language, including its spoken forms; thus scientific English both depended on and contributed to the standardisation process and the new trends and patterns in the grammar that went with it.

Newton and his contemporaries were well aware that they needed to create new forms of discourse for codifying, transmitting and extending

the new scientific knowledge. By Newton's time there had already been a century or more of language planning in various countries of Europe, notably France and England; at first concerned just with writing - shorthands and universal character systems (for writing all languages in the same form, like numbers); then lexical taxonomies (for scientific classification of natural phenomena); and finally artificial 'languages' based on general logical principles of word formation. Such efforts were concentrated on designing the more accessible features of language - the lexis and morphology; and none of the designed systems was ever in fact used.[22] The grammar in its more hidden aspects was not planned; we can be virtually certain that neither Newton nor Galileo before him were at all aware of the important grammatical developments that characterised their work. But it was the grammar that provided the critical resources for constructing the new discourse: in Newton, (1) complex tactic patterns, based on those of speech, for the description of experiments, e.g.

> I found moreover, that when Light goes out of Air through several contiguous refracting mediums as through Water and Glass, and thence goes out again into Air, whether the refracting Superficies be parallel or inclin'd to one another, that Light as often as by contrary Refractions 'tis so corrected, that it emergeth in Lines parallel to those in which it was incident, continues ever after to be white. [p.129]

(2) elaborate postmodified nominal groups for the mathematical expressions, for example:

> The Excesses of the Sines of Refraction of several sorts of Rays above their common Sine of Incidence when the Refractions are made out of divers denser Mediums immediately into one and the same rarer Medium, suppose of Air, are to one another in a given Proportion. [p.130]

(3) and most of all, perhaps, a newly emerging clause type 'happening *a* caused happening *x*', where two nominalised processes are linked by a verb expressing the logical relationship between them, e.g.: [p.280]

> . . . all Bodies by percussion excite vibrations in the Air; . . .

- or with the logical relationship itself also nominalised, e.g.

> . . . the cause of Reflexion is not the impinging of Light on the solid impervious parts of Bodies, but . . . [p.283]

The text thus follows a complex grammatical dynamic, in which experience is first construed in the form of clauses, as a world of happening which can be experimented with; and then reconstrued in the form of nominals (nouns, nominal groups, nominalisations), as a world of things, symbolically fixed so that they can be observed and measured, reasoned about, and brought to order.[23]

But there was, as there always is, a price to pay. For various reasons - partly textual, the Theme-Rheme/Given-New pattern referred to earlier; partly experiential, the need to construct technical taxonomies - the second, nominalising forms soon came to dominate scientific writing (see for example Joseph Priestley's *The History and Present State of Electricity*, 1757; and even more John Dalton's *A New System of Chemical Philosophy*, 1827). The reality construed by this form of discourse became increasingly arcane and remote from the commonsense construction of experience as embodied in the spoken languages of daily life. Within a hundred years it had already come to be felt as alienating: a world made entirely of things, things which became more and more abstract and metaphorical as time went on, was not the world of experience a child grew up in, and there was a widening gap between the daily language of home and neighbourhood and the increasingly elitist language of the learned disciplines. But there were other problems with this register besides its alienation. The difficulty with a reconstructed reality is that it may become too far out, too committed; by the beginning of the present century the scientists themselves were becoming dissatisfied with their own scientific metalanguage, and this motif is enunciated particularly by quantum physicists and their successors, from de Broglie, Bohr and Heisenberg to David Bohm and Ilya Prigogine.[24] It seems that these scientists are not aware that the problem lies with the metalanguage of their own design; they blame natural language for 'distorting' reality by making it fixed and determinate instead of fluid and probabilistic. But it is scientific language that has these properties; whereas natural language in its everyday spoken form, non-settled, non-

written, non-elaborated, has precisely the flux and fluidity, the play-ful quality (i.e. elasticity, with lots of 'play' in it), the indeterminacy and the complementarity that the scientists say is required to construe the universe in its post-quantum state, in which chaos rules and there is a continuum of communication and consciousness stretching all the way from inanimate nature to ourselves and whoever may be out there beyond.

We should not forget, of course, that the everyday spoken language is still a *construction* of reality, even though it may be *less* contrived, less rigid and determinate, than what is 'written'. There is no clear line between language as it evolved with human consciousness and is learnt as 'mother tongue' by a child, and language as it underpins the most abstract and abstruse scientific theories about the universe. As I put it earlier, the grammar of every language in its everyday form is a theory of experience. But as our linguistic construction of experience becomes more and more elaborated, and its grammar increasingly remote from its origins in everyday speech, the high prestige, elitist discourse which it engenders becomes available for ideological loadings of all kinds. We are all familiar with the bureaucratic discourse that derived from it, with examples like:

> Discharge is a redundancy severance, the circumstances of which do not attract payment of the retrenchment benefit.

The move towards 'Plain English' for documents addressed to the public is a reaction against obscure wordings of this kind. But much more threatening is technocratic discourse; this combines the bureaucratic with the scientific in forms which, while obscuri ng the issues at stake, by the same token contrive to persuade us that, since the issues are so obscure, we cannot hope to understand them and so we should leave every decision to the experts.[25] Lemke quotes the following:

> Many large-scale sociological and economic studies show weak and inconsistent associations of educational outcomes with school-resource proxy variables such as expenditures per student and school size, and relatively moderate and consistent amounts of variance associated with student background variables such as socioeconomic status (SES) and family size (McDermott, 1976). Other research suggests that specific and alterable behaviours of

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> parents toward their children such as intellectual stimulation in the home environment are still more strongly predictive of cognitive development than are such proxy variables as family SES and size (Walberg and Marjoribanks, 1976).

Lemke comments:

> We are told [here] that money spent on education has relatively little to do with students' learning and that lower class students don't do much worse than upper middle class students in school. The authority of 'many large-scale . . . studies' is offered for these assertions. A critical reader might offer the absurdity of the studies' conclusions as authority for doubting the reliability of social science research.

Thus there are some ways in which the nominalising, metaphorical grammar of late twentieth century prestige varieties of English has become dysfunctional, at least from some points of view. In the technical, scientific contexts in which it first evolved it construes the world after a fashion which, although forward-looking at that historical 'moment', has now become excessively abstract, objectifying and determinate. And when extended into other contexts it helps to perpetuate an outmoded social structure and is co-opted to promote the anti-democratic ideology that goes with it.

So when planning a language, applied linguists are *not* engaged in forging some passive, ideologically neutral instrument for carrying out a prearranged policy. They are creating an active force which will play its part in shaping people's consciousness and influencing the directions of social change. With this in mind, let us take a look at the present global context within which applied linguists are now holding their Ninth World Congress.

We live - we are constantly being told - in an information society. What this means is that the dominant mode of economic activity that human beings engage in is no longer that of exchanging goods-&-services, as it has been since the beginning of settlement, but that of exchanging information. And information is made of language. It is an applied linguistic world, in which even numbers, and numerical data, become significant only in the context of discursive constructions.

But there has been another, rather less publicised, change in the human condition: that our demands have now exceeded the total resources of the planet we live on. Within a microsecond of historical time the human race has turned from net creditor to net debtor, taking out of the earth more than we put in; and we are using up these resources very fast. This is so little publicised that we might suspect what we are living in is really a *dis*information society.

I took some cuttings from one day's newspaper, the day on which I happened to be writing this section of the paper. Here is an extract from one news article. The article is headed 'Air travel's popularity to soar to new heights' and, like most news nowadays, it is about what someone had to say, in this case 'the annual aviation market forecast of the US plane manufacturer Boeing':

> Its forecast, regarded as one of the most reliable indicators of aviation trends, says airlines will buy 9,935 jet aircraft of all types over the next 15 years at a cost of A$834 billion.
> It says airline traffic to, from and within the Pacific area will lead the growth with rates unmatched anywhere else in the world.
> The study says the rationale for a more optimistic outlook includes prolonged air travel expansion driven by continued growth in discretionary income and a decrease in the real cost of travel.
>
> [Sydney Morning Herald, Monday 12 March 1990]

Everything here, and in countless other such texts repeated daily all round the world, contains a simple message: growth is good. Many is better than few, more is better than less, big is better than small, grow is better than shrink, up is better than down. Gross National Products must go up, standards of living must rise, productivity must increase.

But we know that these things can't happen. We are using up the capital resources - not just the fossil fuels and mineral ores, which we could (*pace* Boeing) do without, but the fresh water supplies and the agricultural soils, which we *can't* live without. And at the same time as we are consuming we are also destroying. We are destroying many of the other species who form part of the planet's life cycle; and we are destroying the planet itself, through global warming and general poisoning with carbon dioxide and methane; through ozone depletion;

through acid rain; and most of all by increasing our population at a rate of almost a hundred million new people a year - at a time when humankind is already using up nearly half of the total productive capacity of the globe.[26]

Paul Ehrlich, one of those who (along with David Suzuki and Edward Goldsmith) are doing most to make us aware of these things, made a point that I referred to earlier, and that is fundamentally important to us as linguists. Human beings, he said, have evolved so that they are not equipped to deal with the kinds of change that are happening now. We are good at recognising and responding to sudden, catastrophic changes; but bad at recognising and admitting to ourselves what he calls 'slow motion crises' formed by gradual trends and shifts of probabilities. Even a massive change, provided it takes place slowly enough, will simply pass us by.

Ehrlich's observation on this is that we have to 'change the way in which we perceive the world'. He sees this as an exercise in information: educating people to respond to trends, graphs and numbers - not just to be able to follow them, but to take them seriously, to treat them as 'news'. He suggests that 'some important environmental state report should be shown every night on the media'. But let us look at the situation from a linguistic point of view. What I have been suggesting is that the same sort of gradual, stealthy processes as take place in the environment also take place in language; and we are equally unaware of them - more so, in fact, because they are beyond the range of our conscious attention.

It is not difficult to become aware of obvious verbal anomalies, like the following cartoon caption quoted by Charles Birch from the Los Angeles Times:

> Eventually we will run out of food to feed ourselves and air to breathe . . . this is something we must learn to live with!

Such explicit motifs, especially where self-contradiction is built in, are the most easily accessible to our conscious awareness. And we can fairly easily train ourselves to react to wordings like 'the survey painted a bleak picture, saying that the number of business failures would continue rising' and 'there will be relatively stable fuel prices in the long term and no US

[26]

or world recession in the foreseeable future' - although we usually fail to perceive any contradictions unless they are thrust before us in adjacent sentences.

Still reasonably accessible to reflection - at the next level down in our consciousness, so to speak - are the lexical effects: single words with affective loadings of one kind or another and regular, more or less ritualised collocations, like *inflationary pressures, prospects sliding, optimistic outlook, unmatched growth rates, business climate improving, early stages of recession*. It does not take much work to show how our world view is constructed by expressions such as these. When we read *output fell sharply*, it is obvious that all our negative loadings from childhood come into play: falling is painful, sharp things are dangerous, and both (especially together!) are to be avoided. On the other hand *traffic is expected to grow* calls up all the comfortable smiles of the admiring aunts who told us how we've grown, as well as the positive relation of growth to consumption - eat your meat and you'll grow into a big girl/boy. And we only have to mention a word like *shrink* to be aware of its pejorative connotations: shrunken bodies and heads, the one who shrinks heads (the psychiatrist), and so on. Some people have tried to maintain the positive value of *grow* but reconstrue it in expressions like *zero population growth* and *negative growth*; but the *zero* and the *negative* sabotage the effort - how can anything that is 'zero' or 'negative' be a desirable goal? (Others have tried to find negatively charged words for growth, like *gigantism* and *elephantiasis*; but these don't work either - the words themselves are too elephantine, and even if giants are baddies elephants are definitely goodies.) It might be more effective to redefine growth as a failure to shrink. Since we are going to have to reduce the GTP (gross terrestrial product), should we not exploit the power of words by making *shrink* the positive term and labelling 'growth' very simply as *negative shrinkage*? This is using the power of the grammar: in this case the device of reversing the marking. How much more effective it would be, for example, if those who are ecologically aware, instead of letting themselves be called *greenies*, in marked contrast to ordinary people, became themselves the unmarked category and the rest of the population were reconstrued as *baldies*.

A little way beyond these is the outer layer of the grammar: the morphological construction of words, types of concord, and closed

system or 'function' words like prepositions and pronouns. This third level is where much of the work of anti-sexist language planning is done: engineering the third person forms *he/she*, *his/her*; reconstructing words like *chairman*, *manpower*, *salesgirl*; taking out the markedness from pairs like *author/authoress*, *nurse* and *male nurse*; redesigning concord structures like *everyone knows his job* to *everyone knows their jobs*, and so on. On the other hand, of the semantics of growthism relatively little is construed at this level - and there is even some counter-suggestion that small is beautiful, in the form of diminutives, although this trend tends to be neutralised by their patriarchal combination of sexism and childism.

But if we probe into the inner layer of the grammar, to the cryptogrammatic fourth level that people are least aware of, here we find a gradual, clause by clause synthesising of a world view, a hidden theory of experience on which we unconsciously base our actions and our strategies for survival. There is a syndrome of grammatical features which conspire - in Martin's term - to construe reality in a certain way; and it is a way that is no longer good for our health as a species. Let me try and identify four of these, beginning with one that is familiar and easy to access.

1. Whorf pointed out many years ago how, unlike the American Indian languages he knew, 'Standard Average European' languages like English make a categorical distinction between two kinds of entity: those that occur in units, and are *countable*, in the grammar, and those that occur in the mass and are *uncountable*. (More accurately, the latter can be counted; but when they are, the count refers to 'kinds of', not 'units of'; e.g. *soils*.) Our grammar (though not the grammar of human language as such) construes *air* and *water* and *soil*, and also *coal*, and *iron*, and *oil*, as 'unbounded' - that is, as existing without limit. In the horizons of the first farmers, and the first miners, they did. We know that such resources are finite. But the grammar presents them as if the only source of restriction was the way that we ourselves quantify them: *a barrel of oil*, *a seam of coal*, *a reservoir of water* and so on - as if they in themselves were inexhaustible.

2. Among the properties construed by the grammar as gradable, most have a negative and a positive pole: for example, with 'good' and 'bad', 'good' is construed as positive. So the *quality* of a thing means either 'how good or bad it is' or 'the fact that it is good', but never 'the fact that it is bad'. In the first sense we can say *how do you rate the quality*

of these chocolates, good or bad? In the second sense, the manufacturer can refer to them as *chocolates of quality*, without worrying that this could ever mean 'bad quality'. Similarly *size* means both 'how big?' and 'being big' (*look at the size of it!*); *length* means both 'how long?' and 'being long', and so on. There are various manifestations of this asymmetry throughout the grammar; but the significant point is that quality and quantity are always lined up together (as they are also in that expression). The grammar of 'big' is the grammar of 'good', while the grammar of 'small' is the grammar of 'bad'. The motif of 'bigger and better' is engraved into our consciousness by virtue of their line-up in the grammar.

3. In transitivity, the part of the grammar that construes our experience of processes - actions and events, mental and verbal processes, relations of various kinds - the entities that take part in processes of a material kind are arranged by the grammar along a continuum according to their potential for initiating such processes: how likely they are to perform the action or to cause the event to take place. Naturally human beings come at the most active, agentive pole, with inanimate objects located at the other end. Such things are acted upon but do not act, and they stay where they are until disturbed. The only environment where inanimates regularly figure as agents is in catastrophic contexts, where (at least if they are big enough) they can become Actor in a process of the 'destroy' subcategory of material processes; and even here they are often metaphorised events, e.g. *the earthquake destroyed the city*; cf. *fire damaged the roof, a branch fell on the car*. The grammar does not present inanimate objects as doers, certainly not in ongoing constructive or conservative processes. So we have problems with David Suzuki's formulation of *all the kinds of things that forests do*. In English if I say of an inanimate object *what's it doing?* it means 'why is it there? - remove it!' So *what's that forest doing?* implies 'clear it!' rather than expecting an answer such as that it's holding water in store, it's cleaning and moistening the atmosphere, it's stopping flooding, it's stabilising the soil, harbouring life forms and so on. The language makes it hard for us to take seriously the notion of inanimate nature as an active participant in events.

4. There is one particular point on this continuum where the grammar introduces a sharp dichotomy, making a clear division of phenomena into two classes. This is often referred to as human versus

non-human, but it isn't that; it's conscious versus non-conscious - those entities that are treated as endowed with consciousness and those which are not. English constructs this dichotomy at various places all over the grammar. The most obvious manifestation is in the pronoun system, where conscious things are *he/she* while non-conscious things are *it*. More far-reaching, however, is the fundamental distinction made by the grammar in mental processes, where the Senser is always a conscious being: thus a clear line is drawn between entities that understand, hold opinions, have preferences etc., and those that do not. Non-conscious entities can be a source of information, but they cannot project an idea (we can say *my watch says it's half past ten*, but not *my watch thinks it's half past ten*). This binary theory of phenomena has obviously been important for our survival, in the stage of history that is now coming to an end. But it imposes a strict discontinuity between ourselves and the rest of creation, with 'ourselves' including a select band of other creatures that are in some semantic contexts allowed in - the most typical of these being first our farm animals and now our highly destructive pets. And, of course, it totally excludes the concept of Gaia - of the earth itself as a conscious being. The grammar makes it hard for us to accept the planet earth as a living entity that not only breathes but feels and even thinks: that maintains its own body temperature despite massive changes in the heat that it receives from the sun, and that dies slowly but inevitably as each of the living species that compose it is destroyed. Let us at least try re-writing that last description: the earth as a living entity that . . . maintains her own body temperature despite massive changes in the heat that she receives from the sun, and that dies, slowly but inevitably, as each of the living species that compose her is destroyed. (We have to choose male or female; and Gaia was a goddess, the 'mother Earth'.)[27]

A grammar, I have suggested, is a theory of experience; a theory that is born of action, and therefore serves as a guide to action, as a metalanguage by which we live. The particular grammars that we live with today are the products of successive 'moments' in the space-time of human history. Much of their potential will no doubt continue to be valid; we are unlikely to demand a sudden, catastrophic reconstruction of reality. But at the same time there are disjunctions, contradictions and overdeterminacies which ensure that it must continue to evolve. A language is a metastable system, which can only persist by constantly

changing in interaction with its environment. The slowest part of it to change is the grammar, especially the inner layers of the grammar, the cryptogrammar, where the real work of meaning is done. The lexis is much more accessible; indeed we already have our slogans for the new age, based on words like *sustain*: what we need now, we are told, is *sustainable development*. We have an American professor lecturing in Australia on *global sustainability* (note here level two at work: everything is possible, by nominalising the potentiality morpheme - *sustain*, *sustainable*, *sustainability*). But, by the same token, the lexis is rather easily co-opted:

> INSECTS may provide the vital factor in making Australia a world leader on sustainable development. [Australian, 10 March 1990]

- and we are back at leading, being out in front, and so once again to growth. You cannot on the other hand co-opt the grammar in this way; certainly not its inner layers.

But, again by the same token, neither can you engineer it. I do not think that even the language professionals of AILA can plan the inner layers of the grammar; there is an inherent antipathy between grammar and design.[28] What we can do is draw attention to it; to show how the grammar promotes the ideology of growth, or growthism. This may suggest in a fragmentary way what the alternatives might be like. But - and this brings me to my final motif - I think that this could only be done effectively under certain conditions. Let me summarise at this point some of the strands in this rather peripatetic discourse.

I started with one of our central concerns, language planning; and more specifically systemic language planning. Although language is an evolved system, not a designed system, it may become necessary to manage it at certain times and places in history: typically, where a language has rapidly to take on new functions, especially technical functions. This is not the management of information; it is the management of the system out of which information is constructed.

Such language planning is thematic not disciplinary; that is to say, it is concerned not with language as object but with systematically extending the power to mean, typically in the context of particular 'fields', or types of social activity. Institutionally, such language planning may

involve all the major components of applied linguistics: computational linguistics and artificial intelligence, first and second language teaching, even clinical linguistics, as well as the more obvious concerns of sociolinguistics, multilingualism, and language in relation to culture.

To understand these processes, and especially to be able to intervene in them, we have to theorise about how language constructs reality: how language evolved as the resource whereby human beings construe experience. The lexico-grammatical continuum, from the vocabulary (the part showing above the surface of consciousness - the tip of the iceberg, so to speak) to the inner layers of the grammar, is the key component, the central processing unit for construing ideational meanings and mapping them on to meanings of the other primary kind, the interpersonal meanings which construct and enact social relationships.

But besides the more familiar contexts for language planning there are certain other spheres where language has become problematic. One was the register of scientific discourse; which scientists themselves began to find constricting: its highly nominalised grammar construed a world of fixed, determinate, discrete and abstract objects and could not cope with the flux, the indeterminacy and the continuity that they now saw as the deeper mode of reality. At the very least, such a distinct variety, with its highly metaphorical construction of the resources of the grammar, created a division between esoteric, technical knowledge and the commonsense knowledge of daily life, a division that is certainly dysfunctional in a modern democratic society.

The other problematic sphere is that of language and prejudice. Here while sexist and racist attitudes are clearly constructed in language it is not any particular variety that is at issue, nor the system of the language as a whole, but the deployment of resources within the system. Thus sex roles are construed by such things as mothers taking up different grammatical options in answering questions asked by boys and by girls; different interpersonal choices made in forms of address and reference; and different transitivity roles assigned to men and women in narratives. Sexual difference, racial otherness, social inequalities of all kinds are engendered and perpetuated by varying the probabilities in the selection of options within the grammar of the everyday language.

Social class is likewise construed in language, and transmitted by parents from different classes favouring different selections within the

grammar. But it is a more 'slow motion' and cryptotypic process than the construction of gender or race: a long-term quantitative effect of orientation towards one 'quarter' rather than another within the overall semantic space described by the language.[29] Perhaps because of the pervasive effect of different attitudes towards generalization and abstraction, the two 'feel like' competing realities.[30] The theory of 'codes' attempts to locate the linguistic basis of classism at the point where the system and the instance meet (where parole becomes langue - except that we have to redefine langue and parole for this to make sense), showing that the different coding orientations of the two classes are *not* different systems but different deployment of resources within the system: different enough, however, such that the contradiction which is construed in this way has not yet been historically transcended.[31]

The system itself is constantly open to change, as each instance slightly perturbs the probabilities; where such perturbations resonate with changing material and social conditions the system is (more or less gradually) reshaped. Thus in renaissance English there evolved a syndrome of features which collectively reoriented the grammar away from preoccupation with the experiential towards greater concern with the textual - from the clause as representation of a process towards the clause as organization of a message. In relation to the grammar as a whole this reorientation was very slight; but it was sufficient to nudge the system so that it could become more technical, more attuned to a specialised division of labour, less dependent on the particulars of shared experience. The everyday grammar thus provided a point of departure for, while still remaining in contact with, the alienating discourses of modern technology and science.

Meanwhile, according to some scientists, a deeper crisis is at hand, no less than the threatened destruction of the entire planet as a habitable environment. This too we can investigate linguistically as a site for possibly deconstruing reality through the grammar. We might be able to work on specific issues at the outer layers of the grammar, replacing war discourse (the language of the Pentagon) by peace discourse, the discourse of borrowing (the language of commercialism and credit capital) by that of saving, the discourse of building (the language of megacontracts) by that of keeping under repair. We might put certain key words in the dock, words like *production* and *growth*. Production is a

major semantic confidence trick; as Goldsmith has pointed out, we don't produce anything at all - we merely transform what is already there into something else, almost always with some unwanted side effects. (Just as a cow does not 'produce' meat; it transforms grass into meat, churning out vast quantities of methane in the process.) We could perhaps relexicalise the semantic domain of 'production'. Growth means evolving or maturing, but it also means getting fat; we have noted the collocational and morphological support for the motif of 'small is beautiful' - but also that much of it suspect as being patriarchal. But all these are relatively minor issues, semantically somewhat localised in their scope. The main issue is that of growthism in the grammar; and we saw how deeply engrammatised are the motifs of growth versus shrinkage, of the unboundedness of our material resources, of the passivity of the inanimate environment and of the uniqueness of humankind instead of our continuity with the rest of creation. These and other features of the language system construe our experience in such a way that we believe we can expand for ever - our own numbers, our own power and dominance over other species, our own consumption and so-called 'standard of living'. Whereas in fact, as Suzuki has shown us, even at present population levels the rich 20% will have to live far more frugally if the poorer 80% are to be able to live at all.[32]

You may think that by now I have left language behind, and am talking simply of social and political issues. But I don't think I have. My point is that such issues are also linguistic ones. Growthism and classism are our two major ideological menaces; and ideologies are constructed in language.[33] But the linguistic perspective suggests one further consideration: that we shall not solve one of these problems without also solving the other. Both growthism and classism were positive and constructive for a certain moment in our history; both have now become negative, the means of self-destruction by division among ourselves and by division between ourselves and the rest of creation. So much we must accept. Now we have seen that, as a general principle, it is the *linguistic system* (things about which we have no choice) that divides us from everything else; whereas it is the *choice of options within the system* (taking up different probabilities) that divides us amongst ourselves. To come back to gender again: what construes our sex roles is not the inherent sexism in the forms of the language (such things are useful for

making people conscious of the problem, but in themselves are trivial - some of the most sexist societies have no trace of gender morphology in their languages) but the way the resources of the language are deployed, how the meaning potential is taken up in the construction of the subject in the family, the media, popular literature and elsewhere. In other words those things which all humans share, or at least all the members of a primary culture band, are construed for them by the forms of the grammar; while those which divide them, which discriminate one group over another, are construed by systematic variation in the choices made within the grammar - what Hasan refers to as 'semantic variation'.

But there is no insulation between these two, because the system *is* the set of its probabilities, in the same way that climate is the set of probabilities in the weather. Climate and weather are one phenomenon, not two; but interpreted within different time depths. So if the linguistic *system* (that is, our long-term, slow motion semiotic praxis) construes us as lords of creation, our shorter-term but no less systematic praxis, the regular exercise of *choice within* the system, construes a fractal pattern whereby some of us are lords over the rest. The one construct that lies nearest the point of complementarity - that is, that can be equally well interpreted as long-term patterns of choice within the system or as a rather ill-defined system of its own (either as long-term weather patterns or as a temporary kind of climate) - is that of social class. It will be difficult to deconstrue growthism without also deconstruing classism, especially now that class has become a world phenomenon, so that what were previously regions of the city are now regions of the globe. The linguistic evidence suggests that these two transformations will have to take place together: that the hegemony arrogated by the human species is inseparable from the hegemony usurped by one human group over another, and that neither will come to an end as long as the other still prevails.

Now that our friends and colleagues from the heart of the Eurasian continent are leaping out of the socialist frying-pan into the capitalist fire; and we ponder whether, with Fukuyama, history is about to end[34] or, with Marx, it is (after all) still not ready to begin; and we realise that, long before we reach the (by now proverbial) one square metre of ground per human being, we have to learn to educate five billion children (and *that* is an applied linguistic task if ever there was one!) - at such a time it is as well to reflect on how language construes the world. *We* cannot

transform language; it is people's acts of meaning that do that. But we can observe these acts of meaning as they happen around us, and try to chart the currents and patterns of change.[35]

Suzuki says 'the planet may soon become unlivable - it's a matter of survival'. Let us formulate this in terms of possible outcomes: there is no historical necessity that this planet will survive in a habitable from, such that we (among others) can continue to live on its surface - this is merely one of the possibilities for the future. What I have tried to suggest is that the things which may rule out this possibility and which we ourselves have brought about - classism, growthism, destruction of species, pollution and the like - are not just problems for the biologists and the physicists. They are problems for the applied linguistic community as well. I do not suggest for one moment that we hold the key. But we ought to be able to write the instructions for its use.

NOTES

* Paper presented to the opening session of the Ninth World Congress of Applied Linguistics, Thessaloniki (Greece), April 1990, and published in the *Journal of Applied Linguistics* (Greek Appllied Linguistics Association) 6, 1990.

1 See Francisco Gomes de Matos, '20 years of applied linguistics: AILA Congresses 1964 - 1984', in Jos Nivette, Didier Goyvaerts & Peter van de Craen (eds.), *AILA Brussels 84: Proceedings*, 5, 1763-1779.

2 See the Preface by Bernard Pottier and Guy Bourquin to *Actes du premier Colloque international de Linguistique appliquée*, Nancy: Faculté des Lettres et des Sciences humaines de l'Université de Nancy (*Annales de l'Est*, Mémoire no. 31), 1966, 7-8.

3 See Fred C.C. Peng, 'What is neurolinguistics?', *Journal of Neurolinguistics* 1.1, July 1985, 7-30; also Gordon Bruce McKellar, 'The language of neurolinguistics: principles and perspectives in the application of linguistic theory to the neuropsychology of language', in M.A.K. Halliday, John Gibbons & Howard Nicholas (eds.), *Learning, Keeping and Using Language: selected papers from the Eighth World Congress of Applied Linguistics, Sydney, August 1987*, Amsterdam: Benjamins, 1990, Vol. 1, 331-351.

4 What Meillet wrote was 'un langage forme un système très delicate et très compliqué où tout se tient rigoureusement' (*Année Sociologique* 8,

1903/4, p. 641). For Firth's rejection of this 'monosystemic principle' see the first few paragraphs of 'Sounds and prosodies', and also 'Personality and language in society', Chapters 9 and 14 in J.R. Firth, *Papers in Linguistics 1934-1951*, London: Oxford University Press, 1957.

5 The very useful concept of 'institutional linguistics' was introduced many years ago by Trevor Hill; see his paper 'Institutional linguistics' in *Orbis* 7, 1958, 441-455.

6 See S.J. Maina, 'Principles adopted for the enrichment of Kiswahili language', *New Language Planning Newsletter* 2.2, December 1987, 1-3.

7 After Marr's death his views and those of his successors such as Meščaninov were rejected outright by Stalin (or whoever wrote 'On marxism in linguistics' on Stalin's behalf) in the linguistics controversy in *Pravda* in May-July 1950; see Jeffrey Ellis & Robert Davies, 'The Soviet linguistics controversy', *Soviet Studies* (Glasgow) 3, 1951. Stalin asserted that language was not part of the superstructure, and that it changed (not by revolutionary changes but) only very gradually over time, particularly its grammatical system and basic lexical stock.

8 Including morphology, of course, in those languages where words display morphological variation.

9 For the notion of 'metafunctions' in systemic theory see my *Language as Social Semiotic: the social interpretation of language and meaning*, London: Edward Arnold, 1978, especially Chapters 2 and 10. There is an excellent summary in Christian Matthiessen's review of my *Introduction to Functional Grammar* in *Language* 65.4, December 1989, 862-871.

10 We see language arising out of the impact of the material and the conscious from another perspective in the ontogenesis of language. The first symbolic acts occur at the time of the child's initial bodily engagement with the environment (reaching and grasping); protolanguage, shared with other mammals, accompanies crawling; and language, uniquely human as far as we know, is associated with walking.

11 That is, conditions other than creolisation and decreolisation. The former is a more or less catastrophic disruption, the latter an accelerated revival.

12 Cf. my 'Language and the order of nature', in Nigel Fabb et al. (eds.), *The Linguistics of Writing: arguments between language and literature*, Manchester: Manchester University Press, 1987, 135-154.

13 And sometimes perhaps was not taken up. For example, it is said that conditions in China in the southern Sung dynasty were very similar to

those of Europe in the fifteenth century (see for example Mark Elvin, *The Pattern of the Chinese Past*, London: Eyre Methuen, 1973; especially Part Two, 'The medieval economic revolution'). Yet in spite of this the transition to capitalism did not take place and the Ming empire settled into a small town market economy.

14 Cf. for example Stephen Harris' observations on what is explicitly taught to children in Australian Aboriginal societies: there is no instruction in experiential matters (e.g. field skills), which are learnt by imitation and so do not need an abstract educational discourse; but a great deal of instruction in interpersonal matters. See Stephen Harris, *Culture and Learning: tradition and education in Northeast Arnhem Land*, Darwin: Northern Territory Department of Education, 1980.

15 From Proposition 13 of Aristarchus' 'On the sizes and distances of the sun and moon'. See Sir Thomas Heath, *Aristarchus of Samos: the ancient Copernicus*, New York: Dover Books, 1981 [originally published Oxford: Clarendon Press, 1913], pp. 392-3 (Greek original with English translation).

16 See Ruqaiya Hasan, 'Semantic variation and sociolinguistics', *Australian Journal of Linguistics* 9.2, 1989, 221-275; and the paper by Ruqaiya Hasan and Carmel Cloran referred to in note 29 below.

17 See Cate Poynton, *Language and Gender: making the difference*, Oxford: Oxford University Press, 1987. On assignment of agency roles see Anne Thwaite, *Sexism in three Mills & Boon Romances*, University of Sydney Department of Linguistics (B.A. Honours thesis), 1983; for an example of the linguistic construction of sexist ideology see Ruqaiya Hasan, 'The ontogenesis of ideology: an interpretation of mother-child talk', in Terry Threadgold et al. (eds.), *Semiotics - Ideology - Language*, Sydney: Sydney Association for Studies in Society & Culture, 1986, 125-146. See also the recent volume edited by Terry Threadgold and Anne Cranny-Francis, *Feminine/Masculine and Representation*, London & Sydney: Allen & Unwin, 1990.

18 See Ruqaiya Hasan, 'Ways of saying: ways of meaning', in Robin P. Fawcett et al. (eds.), *The Semiotics of Culture and Language*, London and Dover, N.H.: Frances Pinter, 1984, Vol. 1, 105-162.

19 See J.R. Martin, 'Grammatical conspiracies in Tagalog: family, face and fate - with regard to Benjamin Lee Whorf', in James D. Benson et al. (eds.), *Linguistics in a Systemic Perspective*, Amsterdam: Benjamins (Current Issues in Linguistic Theory 39), 1988, 243-300. Martin's discussion of the place of grammar is particularly insightful. Note that Martin is not taking English as a norm; in each case he specifies the

corresponding features of English grammar which point the other way - although, of course, the relevant clusterings, or syndromes, of English would have to be separately established (cf. below).

20 See Vilém Mathesius, 'On linguistic characterology with illustrations from Modern English', in Josef Vachek (ed.), *A Prague School Reader in Linguistics*, Bloomington, Indiana: Indiana University Press, 1964, 59-67 [originally published 1928]. See also Chapters 3 and 5 of my *Introduction to Functional Grammar*, London: Edward Arnold, 1985.

21 The account of Galileo's language is the work of Maria Luisa Altieri Biaggi, as reported in her presentation to the Workshop 'The evolution of scientific English' at the University of Bologna, Centro di Studi sui Linguaggi Specifici and Centro Interfacoltà di Linguistica Teorica e Applicata 'Luigi Heilmann', 22-23 May 1989. See also G. Zanarini, 'Rileggendo Galileo: riflessioni sul linguaggio della formazione scientifica', *Giornale di Fisica* 23.2, April-June 1982, 109-125. For the language of Newton see my 'On the language of physical science', in Mohsen Ghadessy (ed.), *Registers of Written English: situational factors and linguistic features*, London & New York: Pinter, 1988, 162-178.

22 But the experience of constructing them, especially the lexical taxonomies, influenced people's conception of their own languages - one interesting output of this exercise was the appearance in England, nearly 150 years later, of Peter Mark Roget's *Thesaurus of English Words and Phrases*, one of the best-selling applied linguistic publications of all time. For a full account see Vivian Salmon, *The Study of Language in 17th-century England*, Amsterdam: Benjamins (Studies in the History of Linguistics 17), 1979.

23 All extracts taken from Sir Isaac Newton, *Opticks, or A Treatise of the Reflections, Refractions, Inflections and Colours of Light* [based on the Fourth Edition, London, 1730], New York: Dover, 1952. The treatise was first published in 1704, the original manuscript (itself the output of twenty years' work) having been destroyed by fire in 1692.

24 See especially David Bohm's discussion of the 'rheomode', Chapter 2 of his *Wholeness and the Implicate Order*, London: Routledge & Kegan Paul, 1980.

25 See J.L. Lemke, 'Technical discourse and technocratic ideology', in M.A.K. Halliday, John Gibbons & Howard Nicholas (eds.) *Learning, Keeping and Using Language: selected papers from the Eighth World Congress of Applied Linguistics*, Sydney, August 1987, Amsterdam: Benjamins, 1990, Vol. 2, 435-460.

26 See David Suzuki, *Inventing the Future: reflections on science,*

technology and nature, London & Sydney: Allen & Unwin, 1990. Compare also Robert Ornstein & Paul Ehrlich, *New World, New Mind: changing the way we think to save our future*, London: Methuen, 1989.

27 For the 'Gaia hypothesis' see James Lovelock, *The Ages of Gaia: a biography of our living earth*, Oxford: Oxford University Press, 1989.

28 This is not to deny the achievements in designed languages ('artificial languages') such as Esperanto. But these are based on existing grammars; they do not attempt to change the grammar's construction of reality.

29 See Ruqaiya Hasan & Carmel Cloran, 'A sociolinguistic interpretation of everyday talk between mothers and children', M.A.K. Halliday, John Gibbons & Howard Nicholas (eds.) *Learning, Keeping and Using Language: selected papers from the Eighth World Congress of Applied Linguistics*, Sydney, August 1987, Amsterdam: Benjamins, 1990, Vol. 1, 67-99.

30 As suggested by Michael Puleston, in *An Investigation into Social Class Differences among School Pupils in Answering Interview Questions*, University of Sydney M.A. dissertation, 1979.

31 In other words, the system (the more or less permanent, invariant features of the language) construes the meaning styles, value systems and ideologies that constitute the culture as a whole; it does not represent the perspective of any one group within the culture - not even that of a 'ruling class'. If the system is hegemonic, this is because it defines the potential within which meanings can be meant. It is the deployment of resources within the system that differentiates social groups within the culture.

32 These scientists may be wrong. But the main argument that I have seen advanced against them is that prophets of doom have always been wrong in the past. This seems irrelevant.

33 Important work on language and ideology has recently been appearing in Australia, by (among others) Ruqaiya Hasan, Gunther Kress, J.R. Martin, William McGregor, Michael O'Toole, Paul Thibault, and Terry Threadgold. Examples were cited in notes 16-19 and 29 above; see also the following: Ruqaiya Hasan, 'What kind of resource is language?', *Australian Review of Applied Linguistics* 7.1, 1984, 57-85; Terry Threadgold, 'Semiotics - ideology - language' and J.R. Martin, 'Grammaticalizing ecology: the politics of baby seals and kangaroos', both in Terry Threadgold et al. (eds.) *Semiotics - Ideology - Language*, Sydney: Sydney Association for Studies in Society & Culture, 1986, 15-60, 225-267; William P. McGregor, 'Language and ideology of a police tracker story in Gooniyandi', in M.A.K. Halliday, John Gibbons & Howard Nicholas (eds.) *Learning, Keeping and Using Language:*

selected papers from the Eighth World Congress of Applied Linguistics, Sydney, August 1987, Amsterdam: Benjamins, 1990, Vol. 2, 175-188; Paul Thibault, 'Grammar, technocracy and the noun: technocratic values and cognitive linguistics', in Eija Ventola (ed.) *Functional and Systemic Linguistics: approaches and uses*, Berlin and New York: Mouton de Gruyter, 1991, 281-305; papers by the abovementioned authors in David Birch & Michael O'Toole (eds.), *Functions of Style*, London and New York: Pinter Publishers, 1988.

34 See Francis Fukuyama, 'End of history and the triumph of liberalism . . . ', *Washington Post*, December 1989. Fukuyama's argument is summed up by Peter Munz as 'one tautology and one tacit platitude' (*Guardian Weekly*, Vol. 142, no. 6, February 11, 1990, p.2). For capitalism as 'the closing chapter of the prehistoric stage of human society' see Karl Marx, *A Contribution to the Critique of Political Economy* trans. N. I. Stone, Chicago: Kerr, 1904, Preface.

35 As always, language also works by its example - the metaphoric processes by which language itself displays the features it is construing. Thus the patterns of change we observe themselves amount to a form of growthism in language.

II. THE ACT OF MEANING[1]

I

If I had been choosing a title after finishing this paper, instead of before writing it as one always has to do, I should probably have sought a wording that was more suggestive of the power of language, because this was the motif that tended to emerge more strongly as I wrote. Ideally, perhaps, I should have needed to introduce this second motif alongside the original wording, so as to bring out the inevitable connection between the two. The power of language is vested in the act of meaning.

Many years ago, I wrote somewhere that the act of meaning is a social act; and so it is. It is also a biological act; and it is also a physical one. But these components are related, in a logical and also in a historical sequence. The history of western thinking, in the centuries following Galileo, often seems like a struggle to come to terms, one by one, with these differing and increasingly complex types of phenomena: first the physical, then the biological, then the social; and it seems to have taken three or four generations to crack each new code.

You may well object that nothing could be more complex than the phenomena of the physical universe. Certainly in understanding them physicists are involved in quite staggering efforts of integration and of abstraction; and we are no nearer 'the end of physics' now than we ever were - or than the end of linguistics or the end of any other branch of knowledge. Or, if we are, this is, as Schaffer (1991) has convincingly shown, a cultural closure not a physical one: a limitation on our own ways of knowing, not on what there is to be known. But in another sense, physical systems-&-processes - that is, physical phenomena construed as the domain of systematic knowledge - are simpler to apprehend, because we are able to interpret them purely as physical; whereas biological systems-&-processes are not just biological - they are also physical. And when we turn to social phenomena, these are not just social; they are social, and biological, and physical. The consequence is that, by this time, we no longer know an instance when we meet one. When one is confronted with social processes, what is a fact any more?

And this problem of instantiation - of the relation between observable phenomena and the system that, in some sense, 'lies behind'

them - becomes still more formidable when we reach phenomena of the fourth type, namely those of meaning, or semiotic ones, which are (the pattern is familiar!) at once also social, and also biological, and also physical. While we may criticize Saussure for having failed to solve this problem (that of the nature of *parole* and its relation to *langue*), we should rather give him credit for having problematized it in the first place, as Culler did (1977). This failure to construe the link, in semiotic systems-&-processes, between the **instance** - the act of meaning, in other words - and the **system** (prototypically, a language) has haunted our late twentieth century linguistics, which has oscillated wildly between system and instance, creating a massive disjunction between the two. In the 1960s, if you dared to mention the text, you were dismissed as 'data-oriented'; while in the 1980s if you ventured to refer to the system, you were attacked for 'totalizing'. But combining being data-oriented with totalizing is a useful recipe for understanding things; we sometimes call it scientific method.

So there is a gradient here, a cline of difficulty, as we move from physical to biological to social to semiotic systems; as we move along this cline we get further away from anything we can recognize as effects following from causes, causes leading to effects. But there is also another cline, that of ever-increasing risk, as we move towards the more distinctively human processes. Already in the 18th century people felt threatened when scientists applied the methods of the physical sciences to biological systems, systems with life in them; and they - or their descendants - became more uncomfortable some three of four generations later when these same methods began to be applied to social systems, which have not only life but also value. Small wonder, then, that many react with dismay when the domain of science starts encroaching on those which are the most human systems of all, namely semiotic systems - which have not only life, and not only value, but also meaning.

It is threatening, no doubt, to discover that there are processes beyond our conscious control in those very acts of consciousness by which our own selves are most clearly defined. Linguists often start their papers with the formula 'You're not going to like what I say'; no doubt this is partly because they are hoping to establish a claim for originality, as one has to do in order to gain tenure in these difficult times, but we don't hear this, as far as I can tell, from scientists or mathematicians - because it is also a spell, a call for protection against the dangers of

apprehending the forces of meaning. The danger lies in **relating** the instance to the system, because that is the source of the power. You are safe in studying the system (as linguists traditionally did), because you do not reveal it at work in the form of text. You are safe in studying the text, as a philologist or student of style or of discourse, because you do not let it display the power of the system. But if you put the two together the text is revealed for what it is, an act that has meaning because it is not *sui generis*; it is the actualizing of a potential, by means of processes that are patterned - and therefore, in an important sense, predictable. So there is an emotional gradient here as well as an intellectual one. We resist being told how much of what we 'choose' to say is programmed, either as ready made pieces of wording, as Pawley (1985) made clear, or in the probability profiles revealed by large-scale quantitative studies (Nesbitt & Plum, 1988; Halliday & James, 1993). Yet no child could learn a mother tongue if it was not characterized by massive regularities of these two complementary kinds.

Now a physical system is a physical system. But a physical **theory** is a semiotic system: a 'system of related meanings', as Lemke (1990a) describes it. We gain our understanding of physical phenomena - of phenomena of any kind, in fact - by using the special powers of a semiotic system to transform them (cf. Matthiessen, 1991). The 17th century 'founders of modern science' were aware of this power that language had, and were inclined to be somewhat suspicious of it, believing that phenomena were often distorted in the process of being transformed into meanings. Hence they took seriously Francis Bacon's cautions against what he called the 'idols of the marketplace' (*idola fori*), one of the four kinds of idol that he felt impeded scientific thinking. The *idola fori* were the misconceptions that arose, in the words of Dijksterhuis (1986),

> ... from the thoughtless use of language, from the delusion that to all names there must correspond actually existing things, and from the confusion of the literal and the figurative meaning of a word...
>
> [Dijksterhuis, 1986: IV 184, p.398]

The physical scientists' defence against this semiotic idolatry turned out to be one of the ironies of modern semohistory. While they

were committed to producing a 'language of science' that would be free of ambiguity and metaphor (cf. Coetzee, 1981). Newton and his successors developed a form of discourse that was almost certainly the most highly metaphorical the world had yet encountered, with all the ambiguity that that connotes. But the metaphor they were awary of was metaphor in its canonical sense, the metaphoric use of the lexis; whereas the metaphor they created in their own discourse is a metaphor that lies in the grammar (Halliday, 1988; Martin, 1990a; Halliday & Martin, 1993).

Meanwhile in the centuries that followed the notion of the power of language tended to recede into the background. The scientists got on with the business of doing science; and the linguists got on with the business of describing language, within their own definition of the task - for example, in England, the study of phonetics and spelling reform. For Saussure the only significance of an act of meaning - or 'act of speaking', *acte de parole* - was as a piece of evidence for the system, not as a constitutive act. It is striking, therefore, to find that this motif, that of the power of semiotic processes, has reemerged as a major theme in the late 20th century. It has reemerged, in fact, from a number of different directions, so that it is not easy to present a brief yet coherent account. But let me try and enumerate some of the contexts in which the power of language is proclaimed, giving examples from the work that I am familiar with (which is, obviously, only a small portion of the whole). We may perhaps identify five general headings: (1), language as a means of access; (2), language as ideology; (3), language and social inequality; (4), language as metadiscourse (in the construction of reality); (5), language as model (for understanding systems of other kinds).

II

(1) **Language as means of access**. The notion that language provides a means of access to particular domains, or spheres of social action, has been familiar since the 1960s: from the work of Gumperz and Hymes, in relation to functional varieties or 'registers', and from Bernstein's work in relation to codes. I shall come back to Bernstein under another heading; the common factor here is that the mode of access is some **variety** of a language. Opening up access, in this semiotic sense, is now

seen as a central task of language education. Jay Lemke's important book on science education is called *Talking Science*, and subtitled '*language, learning, and values*'. Britain now has a National Curriculum, and the teacher education materials on 'Language in the National Curriculum' by Ronald Carter and his colleagues put in the foreground the learner's access to knowledge through language. Most 'linguistic' of all are the Australian genre-based curricula, especially those produced for the New South Wales Disadvantaged Schools Program under the leadership of J.R. Martin. These last are based explicitly on the view that in order to access knowledge of any kind you have to control the semiotic resources which construe that knowledge; and furthermore, that only by redesigning the curriculum around those resources - the generic construction, the discourse semantics and the lexicogrammar of the registers involved - can educators hope to open up to the learners the various discourses that make it possible to participate in the democratic political process. (Lemke, 1990*a*; Carter et al., 1990; Christie et al., 1991-92; New South Wales Disadvantaged Schools Program, 1990-; Matthiessen, in press.)

Work of this kind would not easily derive from, or reconcile with, a correspondence notion of language, the view that language is doing no more than reproducing a cognitive model of experience. Rather, it assumes a constructivist interpretation, whereby language actively construes human experience, from the 'commonsense' constructions of the everyday mother tongue to the highly elaborate edifices of the disciplines as they are taught and researched in schools and universities. In this perspective, the grammar of every natural language is (among other things) a theory of human experience; it is through our acts of meaning that we transform experience into the coherent - though far from consistent - patchwork that we learn to project as 'reality'.

(2) **Language as ideology**. In other words, activities such as these presuppose a Whorfian view of language, at least in terms of my perceptions of what Whorf was saying, which have always been different from the received interpretation of Whorf's views in the United States. For an insightful account, let me quote from a recent paper by Alan Rumsey, entitled 'Wording, meaning, and linguistic ideology' (1990):

> In common with Whorf, I believe that the best way to study the relationship between language structure and other aspects of social

> life is by looking for what he called 'fashions of speaking': global complexes of features that 'cut across the typical grammatical classifications, so that such a 'fashion' may include lexical, morphological, syntactic and otherwise systemically diverse means coordinated in a certain frame of consistency' (Whorf, 1956: 158).
>
> To what did Whorf seek to relate such 'fashions'? Most of the research that has been done on the so-called Sapir-Whorf hypothesis has been about language and *perception* or 'cognitive processing' (cf. Lucy, 1985). For present purposes, a better reading of Whorf is the revisionist one in Silverstein (1979), which takes him to be addressing himself to the Boasian problem of the relation between language as 'primary ethnological phenomenon' and the 'secondary rationalization' in terms of which speakers of the language understand it to operate (Boas, 1974: 23 ff.).
>
> [Rumsey, 1990: p. 346]

Rumsey finds 'a certain kind of ideology developing 'in conjunction with' certain kinds of language structures', a relationship which he characterizes as a dialectical one. The 'frame of consistency' treated in his paper is one which relates certain cohesive devices to the grammar of reported speech, in English and in Ungarinyin; so here the dialectic is between language structures and 'commonsense notions about the nature of *language* in the world' [my italics]; but for Whorf they could be commonsense notions about any aspect of the world. Other examples of such 'frames of consistency' will be found in the work of Martin on Tagalog (Martin calls them 'grammatical conspiracies'), and of Hasan on Urdu; the syndrome of features of transitivity and theme that developed in Early Modern English, first identified by Mathesius, would also constitute such a frame of consistency (Martin, 1988: Hasan, 1984; cf. also Paper 1 above).

Language neither drives culture nor is driven by it; the old questions about which determines which can be set aside as irrelevant, because the relation is not one of cause and effect but rather (as Firth saw it, though not in these words) one of realization: that is, culture and language co-evolve in the same relationship as that in which, within language, meaning and expression co-evolve. Thus above and beyond the random,

local variation between languages that was the subject matter of earlier typological studies, we may expect to find non-random variation realizing different construals of reality across major alternations in the human condition. But given that language and culture evolve together in this kind of relationship, it is inevitable that language will take on an ideological role. It has been accepted for some time that race and gender are constructed in language; and the 'critical linguistics' developed by Roger Fowler and his colleagues in the late 1970s sought to ground this recognition in a deeper awareness of the role of **grammar** in such constructions - for example by examining the grammar of politically divergent texts which were reporting on one and the same racially charged event (Fowler et al., 1979). Within the same period, feminist studies of language moved on from gender pronouns and expressions of uncertainty to take account of such things as the divergent roles in the grammar of transitivity taken up by female and male characters in popular romantic fiction (Thwaite, 1983). Interestingly, this level of interpretation has now become generally accessible; see for example the article 'Romance in Cartlandia' by Peter Thomas in the *Guardian Weekly* of 29 March 1992. One can now cite numerous studies of the construction of ideology through acts of meaning (as examples, Kress & Hodge, 1979, 1988; Threadgold et al., eds., 1986; Threadgold & Cranny-Francis, eds., 1990; Van Leeuwen, 1989; Lemke, 1990*b*; Thibault, 1988); and it is a central concern of the Australian journal *Social Semiotics*.

(3) **Language and social inequality**. And it is what Bernstein was telling us about some 25 years ago. In a hierarchically ordered society there are likely to be major **semiotic** disjunctions between different levels in the hierarchy. Social classes are construed iii language; hence they are validated (naturalized), reinforced, and transmitted in language; thus, language is functioning as an agency of social inequality. Bernstein's ideas got distorted even more than those of Whorf - partly because they are very threatening: if acted upon, they could disrupt the social order. But they are also difficult to grasp; and I think that this is because the phenomena he was observing, that he referred to as codes (or more fully as 'socio-linguistic coding orientations'), fall squarely in the problematic middle ground between the system and the instantiated **act of meaning**. Such codes, in other words, do not form distinct linguistic systems (they are not different languages); but nor are they particularities of

performance (either in the Chomskyan or in the Hymesian sense). Bernstein did once try to locate them with reference to a competence/ performance dichotomy, but he soon abandoned this as a mistake; rather, such phenomena neutralize these distinctions, and force us to realize that the 'system' and the 'instance', by whatever names we choose to call them, are not in fact different phenomena - they are one and the same phenomenon seen by different observers. Let me use my favourite analogy here, that of the climate and the weather. Certain changes seem to be taking place around us today, quite serious ones, like global warming; but are these changes perturbations in the climate, or are they variations in the weather pattern? If you ask that question, it makes it seem as if there are two possible classes of event; but there are not. What the question means is, will I understand these changes better if I view them from the standpoint of a climate observer, or from the standpoint of a weather observer? We shall probably need both perspectives; but in any case, climate and weather are not different phenomena; they are different observational time depths. So it is with language; the language system, and the language instance or act of meaning, are one phenomenon not two; and codes, like Whorf's fashions of speaking, have to be observed in both perspectives.

Hasan has interpreted Bernstein's codes, in semiotic terms, using the concept of semantic variation. This is different from functional, or register, variation in one critical respect: in semantic variation there is a higher level constant - we can talk of semantic 'variants'; whereas in register variation there is not. Registers are ways of doing different things; there is no level of interpretation at which, say, technocratic discourse and casual conversation become signifiers of a common signified. With codes there is; and in this respect, codes resemble social dialects; but whereas social dialects (like dialects in general) realize their higher level constant in the semantic system (that is, within language itself), codes come together only **outside** of language, in the culture. It is only at an abstract level in the context of culture that different codes can be seen to realize a common 'signified'.

Following up Bernstein's work two decades later, Hasan and her colleagues analysed semantically over 20,000 messages of spontaneous conversation between mothers and their pre-school children in the home, and subjected the results to a detailed cluster analysis. The analysis

showed significant differences in the patterns of meaning that were adopted, respectively, by mothers of boys and mothers of girls. Their discourse did not constitute two different language systems (two climates); they were all native speakers of Australian English. Nor, on the other hand, were they just random fluctuations in the semiotic weather. They were different ways of meaning, which construed boys and girls as different social beings. And the same study - same analysis, same data, same program - showed up other differences, equally significant both ideologically and statistically, between mothers from the working class and mothers from the middle class. And the children's own part in the dialogues revealed very clearly - not by direct imitation of the mothers, which would make no sense, but by a deeper semiotic resonance in their grammar - that they were, at 3 and a half years old, paid-up members of the social bond (Hasan, 1989; Hasan & Cloran, 1990).

(4) **Language as metadiscourse**. There are three parts to this: construing experience, enacting interpersonal relations, creating a semiotic level of reality. In the 1960s, in what I called the 'metafunction' hypothesis, I suggested that the content plane of language - the lexicogrammar and its higher level ordering as semantics - could be best understood as simultaneously constructing meanings of three different kinds: meaning as reflection - construing human experience; meaning as action - enacting interpersonal relationships; and meaning as texture, which I saw as having an enabling function with regard to the other two (Halliday, 1967/68).

The centrepiece in the grammar of experience is the transitivity system. Davidse has shown, in her comprehensive *Categories of Experiential Grammar* (1991), how the transitivity system of English construes experience for those for whom it serves as a mother tongue. For most recent generations, until the very recent ones, this has meant the Anglo-Celtic peoples; and I include '-Celtic' here, not just to recognize that the Celts now largely have to make do with English, or with French, but to make the substantive point that, from the more cryptotypic aspects of the grammar, it seems clear that Celtic semogenic resources have contributed significantly to the semantic potential of these two languages. The transitivity system has also figured prominently in French work in functional grammar and semantics, notably that of Bernard Pottier; and its role in reality construction is central to the

thinking of Claude Hagège (eg. Hagège, 1985). And perhaps I might pay respect here to another distinguished Francophone colleague, the late Algirdas Greimas, who died only a few weeks ago. Greimas was convinced, though from a different point of departure, of the essential unity of language and experience. Fabbri wrote of him (1992):

> On sait que, pour Greimas, langues (naturelles) et monde (naturel) ne sont pas séparés mais au contraire entrelacés comme dans un monogramme. Il s'agit pour lui de macrosémiotiques dans lesquelles les catégories du signifiant mondain sont les mêmes que celles qui constituent le plan du contenu du langage . . .
>
> (Fabbri, 1992: p.21)

A very natural framework for modelling transitivity structures is one based on processes and participant roles, along with some third category of circumstantial elements. Martin has proposed, for Tagalog, an alternative interpretation of transitivity, one based on orientation. There can be more than one way of construing experience in grammar, and we may need a different grammatics to bring out the complementarities involved (Halliday, 1967-68; Martin, in press).

But the full creative power of an act of meaning arises from the fact that language **both** construes **and** enacts. It is not only a way of thinking about the world; it is also, at one and the same time, a way of acting on the world - which means, of course, acting on the other people in it. There has always been a place in studies of grammar for a few very general interpersonal systems such as mood; recently, however, not only have these systems come to be interpreted more theoretically, but also other kinds of interpersonal meaning have been brought under attention (eg Martin, 1990*b*; Butler, 1988). Martin talks of 'interpersonal grammatization', and it has always seemed to me that interpersonal systems such as those realized by intonation (in many languages, such as English) should be understood as the enactment of social meaning through the systemic power of the grammar. The role of interpersonal grammar in learning is foregrounded in Lemke's work (e.g. 1988). In my view one of the significant facts about children's language development, in the context of language education, is that so many

grammatical resources - including those which will eventually function overwhelmingly in experiential contexts - are developed first in the interpersonal domain. For example, at the time of transition from protolanguage to mother tongue (roughly, one and a half to two years old), a child may learn to give information that is not known to the listener (as distinct from rehearsing experience that has been shared) when he has hurt himself and needs to gain sympathy (Painter, 1984); children typically first learn the logical semantics of conditionals in the context of threats and warnings (Phillips, 1986), and they first master grammatical metaphor in the form of interpersonal metaphors of mood and modality (Halliday, in press).

But this conjunction of the experiential and the interpersonal depends in turn, for its efficacy as discourse, on meaning of a third kind, the creation of texture. Matthiessen (1992; cf. also 1991) interprets and explains this as the grammaticizing of the semiotic process itself. The grammar creates its own 'world three' - not quite in Popper's sense - which is a world that is made of meaning, the semiotic counterpart of our worlds of reflection and of action.

(5) **Language as model**. Some time ago I started using the term 'grammatics' to refer distinctively to grammar as a theoretical pursuit: grammatics as the study of grammar, parallel to linguistics as the study of language - but more especially applying the term to grammatical theory used as a source of explanation. Like all theories, a theory of grammatics is a semiotic system; but with the special characteristic that the phenomena it is designed to explain are themselves also semiotic systems - languages. Traditionally, linguists have usually tried to model their theories on theories that were designed to explain systems of other kinds; but in semiotics (which is not a discipline, but a thematic organization of knowledge like mathematics) all phenomena are being investigated and interpreted as systems of meaning, and this makes it possible to use grammatics as a way of explaining them. The most immediately accessible are other, non-linguistic, semiotics such as forms of art: not just literature, which can naturally be apprehended through the grammar (by means of a grammatics) because it is made of language (cf. Butt, 1984, 1988; Gregory, 1985; Threadgold, 1988), but also performance (dance and drama), music, and forms of visual art. Michael O'Toole (1989, in press) uses grammatics for his investigations of painting, architecture and sculpture; Steiner (1988) and Van Leeuwen (1988) for

music; and Paul Thibault (1991), starting from narrative theory, exploits grammatics as a resource for integrating the text into a broader framework of 'social semiotics as praxis'.

But it is now being suggested that some **physical** systems might be better understood if they could be modelled 'as if' they were semiotic ones. This motif began to appear some time ago in the writings of post-quantum physicists, perhaps in conjunction with their renewed interest in the language of their own science; and as far as I can tell it seems to have an interpretation on two different levels: (1) that some physical systems **incorporate** semiotic ones (eg. Prigogine and Stengers' example of the communication among molecules that is necessary for them to operate as a 'chemical clock' - and compare, in biology, communication among the eggs in a clutch getting ready to be hatched); and (2) that some physical systems **are** semiotic (eg Bohm's interpretation of the speed of light as the maximum speed of propagation of a signal) (Prigogine & Stengers, 1982: 147-8; Bohm, 1980: 123). In either case, the critical event is an act of meaning. A physical system is no longer 'just' a physical system. But, by the same token, a grammatics is no longer just a theory of grammar.

III

So in the past generation we seem to have rediscovered something of the power of language, recognizing that an act of meaning is not the coding and transmitting of some pre-existing information or state of mind, but a critical component in a complex process of reality construction - critical in that on the one hand it is itself one part of reality, and on the other hand it is a metaphor for some other part. Semiotic systems, while they are **components of** human experience, along with physical, biological and social ones, are also **theories about** that experience (including about themselves, there being no constraint on their reflexivity (Lemke, 1984)). That is their metaphorical aspect; and it is the success of that metaphor, in one's semiotic acts, I think, that determines how effective one's discourse is going to be. This power of the act of meaning would not have been news to the sophists in ancient Athens, who constructed their grammatics in order to find out how language could persuade people of something even when it wasn't true. Or to the founders of modern science, who tried to design their language so that it would open up for

them the gateway to new knowledge. And of course it is no news to my co-presenter tonight, Dell Hymes, who has proclaimed not only the power of language but also the need for a grammatics with which to apprehend it - as he said, writing about attaining the 'joy and understanding' of Native American verbal art, 'If we do not deal with the means, we cannot possess the meanings' (Hymes, 1981: 5).

Nevertheless we cannot help noticing a contradiction here. In fact, relatively few of those concerned, however much they may be aware of, and may even celebrate, the power of the act of meaning, have actually tried to 'deal with the means' of its achievement. Unlike the works I have been citing in this paper (which do), most studies in semiotics - including what we might call 'applied semiotics' - do not engage seriously with language; and many explicitly deny that it is relevant to do so. When physical scientists comment on language, they often seem content to treat it at the level of the eighth grade.

To be fair to those scientists, this is partly, I think, because they are aware that we - the linguists - have still not cracked the code of systems of this fourth order of complexity, semiotic systems. We do not yet fully understand the nature of our own fundamental abstractions, those of realization and instantiation, nor the complex multiple relationship that holds between them. And for our other colleagues there is probably a further reason: that much of what we are able to tell them tends to be rather discouraging - like Bacon with his *idola fori*, we are obsessed with language doing its worst. We even hold conferences on lying.

I should plead guilty here too: in my paper at AILA in 1990 I particularly emphasized how the power of language functions to create and maintain all kinds of inequalities and hegemonies - not only citing the familiar examples of social class and sex (or 'gender' as we now call it, in a ritual bow to these same idols), but also suggesting how our language locks us in to the twin myths of endless growth and of our own status as the lords of creation (myths of growthism and lordism, if you like these -istic terms). I stressed these inequalities, these antidemocratic fashions of meaning; and I did this so as to show that we need to learn to think grammatically, to become aware of such cryptotypic effects in our everyday 'commonsense' language, if we want to continue to prosper as a species, or even if we want to survive.

So let me end this evening by turning over the coin, and proclaiming instead the democratic potential of our familiar semogenic

resources. Our transitivity systems, for example, seem at first sight to be dominated by this apparently immutable hierarchic scale of animacy, privileging humanity over the rest of creation and, within humanity, the generalized human male. But the semantic space construed by transitivity is an elastic space; these are tendencies - they are not categorical, which means they can be reversed, or subverted. This is possible because when you override them, it does not force a reinterpretation; compare my example of *what the forest is doing*, which can be interpreted as an effective material process with *the forest* as Actor (and, potentially, as Agent, depending on what follows). [A categorical system is one you cannot subvert. Here, if you produce an 'illicit' combination, it simply gets co-opted - that is, reinterpreted according to the category, or one of the categories, in question. Thus in English, in mental processes (only), the distinction of '+/- consciousness' is categorical; hence if I ask what the forest is thinking, or what the forest knows, the forest is thereby co-opted into the class of conscious beings - or else the process itself is metaphorized into something else, as in *what the forests are now seeing is total destruction*.] Interestingly, it is in symbolic processes that humans lose any such privileged status: any entity is equally acceptable as a signal source, e.g. *that rock formation tells you that the whole region was uplifted*.

We can also subvert the process by which the code barrier limits access to educational knowledge. (I do not think, by the way, that there is any significant difference, in this respect, among the various English-speaking countries. The British are always cited as uniquely class-ridden, but this is because they wear their classes on their sleeves, whereas over here the pattern is more covert - I think Paul Fussell is one who has made this point. But the same barriers are in place.) Since the disjunction between educational knowledge and commonsense knowledge is construed in the grammar, it can also be deconstrued in the grammar. Simply by spreading knowledge about language ('KAL', as it is called in the British work) one can do much to demystify educational discourse; but one can also use the grammar as a resource in order to bridge - or even to close - the gap. Two strategies suggest themselves. One, to provide steppingstones from 'common sense' to technicality and grammatical metaphor within the experiential component of the grammar - agnate forms of discourse that form a gradation from the one to the other. The other strategy is to map more learner-friendly interpersonal meanings

into the educational discourses. You have to be careful, in that second case, to avoid what Martin calls 'childism' (1989); but I think it can be done.

In any case the disjunction is partly a matter of our own failure to understand the nature of commonsense knowledge, knowledge as construed - and learnt by children - in the language of daily life. Of course, children have to relearn a great deal once they come into school - they have to systematize and technicalize their own construction of experience; but that is no reason why we should not recognize how much they knew before they came. Ruqaiya Hasan's study of 'Rationality in everyday talk between mothers and children' shows the many forms of reasoning that are deployed in everyday discourse in the home; the 3-year-old's grammar has plenty of varied resources for constructing sequences of argument (Hasan, 1992). What Hasan has shown is that different kinds of rationality are functional in different social contexts. Moving into the discourse of education is not a matter of transcending some opposition between non-rational and rational; it means recognizing the contexts in which different forms of rationality are deployed.

If we compare the discourses of today with those of a century ago, we become aware of the potential that the system has for change. This is a potential, of course, that has to be actively taken up, if we want it to change in a particular direction: taken up not by legislation or decree, but by changing our own habits of meaning, towards different frames of consistency. The semantic space can always be expanded; as I said before, it is an elastic space, indefinitely malleable - and semiotic growth, growth in meaning potential, is one kind of growth which does not use up natural resources or engender polluting side-effects! The system of language is always in transition - because every act of meaning transforms it, however microscopically, from what it was into something else. You cannot redesign it; but you can nudge it along by the innumerable small momenta (a phrase of Whorf's I never tire of repeating) of thoughtful acts of meaning. You can even reverse the marking, up to a point, as protagonists of the cause of women have done with English personal pronouns. This is because there is no insulation between the system and the text; the system is the text, only (as I put it earlier) it is being observed from a different time depth. Hence it is in the act of meaning that the power of language resides; and that is what makes linguistic systems, in the last resort, subject to the democratic process.

NOTES

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REFERENCES

Bohm, David (1980) *Wholeness and the Implicate Order* London: Routledge & Kegan Paul [Ark Paperbacks, 1983].

Butler, Christopher S. (1988) Politeness and the semantics of modalized directives in English. In James D. Benson, Michael J. Cummings & William S. Greaves (eds.), *Linguistics in a Systemic Perspective* Amsterdam: Benjamins.

Butt, David (1984) *The Relationship between Theme and Lexicogrammar in the Poetry of Wallace Stevens* Macquarie University Ph.D thesis.

Butt, David (1988) Ideational meaning and the existential fabric of a poem. In Robin P. Fawcett & David J. Young (eds.), *New Developments in Systemic Linguistics, Vol. 2: theory and application* London & New York: Pinter.

Carter, Ronald et al. (1990) *Language in the National Curriculum* Department of English Studies, University of Nottingham.

Christie, C. et al. (1991-2) *Language as a Resource for Meaning, Series 1-4* Sydney: Harcourt Brace Jovanovich.

Coetzee, J.M. (1981) Newton and the ideal of a transparent scientific language. *Journal of Literary Semantics*.

Culler, Jonathan (1977) *Saussure* Glasgow: Collins (Fontana Modern Masters).

Davidse, Kristin (1991) *Categories of Experiential Grammar* University of Leuven Ph.D. thesis.

Dijksterhuis, E.J. (1961) *The Mechanization of the World Picture* London: Oxford University Press [Princeton, N.J.: Princeton University Press, 1986].

Fabbri, Paolo (1992) *Pertinence et adéquation* Limoges: PULIM, Université de Limoges (Nouveaux Actes Sémiotiques 19).

Fowler, Roger, et al. (1979) *Language and Control* London: Routledge & Kegan Paul.

Gregory, Michael J. (1985) Linguistics and theatre - Hamlet.s voice: aspects of text formation and cohesion in a soliloquy. *Forum Linguisticum* 7.

Hagège, Claude (1985) *L'homme de paroles: contribution linguistique aux sciences humaines* Paris: Fayard.

Halliday, M.A.K. (1967) *Intonation and Grammar in British English* The Hague: Mouton (Janua Linguarum Series Practica 48).

Halliday, M.A.K. (1967-68) Notes on transitivity and theme in English, Parts 1-3 *Journal of Linguistics* 3.1, 3.2, 4.2.

Halliday, M.A.K. (1988) On the language of physical science. In Mohsen Ghadessy (ed.), *Registers of Written English: situational factors and linguistic features* London & New York: Pinter.

Halliday, M.A.K. in press Towards a language based theory of learning. *Linguistics and Education.*

Halliday, M.A.K. & Z.L. James (1993) A quantitative study of polarity and primary tense in the English finite clause. In John M. Sinclair, Michael Hoey and Gwyneth Fox (eds.), *Techniques of Description: spoken and written discourse* London & New York: Routledge.

Halliday, M.A.K. & J.R. Martin (1993) *Writing Science: literacy and discursive power* London & Washington, D.C.: Falmer Press.

Hasan, Ruqaiya (1984) Ways of saying, ways of meaning. In Robin P. Fawcett et al. (eds), *The Semiotics of Culture and Language, Vol 1* London & Dover, N.H.: Pinter.

Hasan, Ruqaiya (1989) Semantic variation and sociolinguistics. *Australian Journal of Linguistics* 9.2.

Hasan, Ruqaiya (1992) Rationality in everyday talk: from process to system. In Jan Svartvik (ed.), *Directions in Corpus Linguistics: proceedings of Nobel Symposium 82, Stockholm 4-8 August 1991* Berlin: Mouton de Gruyter.

Hasan, Ruqaiya & Carmel Cloran (1990) A sociolinguistic interpretation of everyday talk between mothers and children. In Halliday, M.A.K., John Gibbons & Howard Nicholas (eds.), *Learning, Keeping and Using Language: selected papers from the Eighth World Congress of Applied Linguistics, Sydney 16-21 August 1987, Vol.1* Amsterdam: Benjamins.

Hymes, Dell (1981) *In vain I tried to tell you: essays in Native American ethnopoetics* Philadelphia: University of Pennsylvania Press.

Kress, Gunther and Robert Hodge (1979) *Language as Ideology* London: Routledge & Kegan Paul .

Kress, Gunther and Robert Hodge (1988) *Social Semiotics* London: Polity Press.

Lemke, Jay A. (1984) *Semiotics and Education* Toronto: Victoria University (Toronto Semiotic Circle Monographs, Working Papers and Prepublications).

Lemke, Jay A. (1988) Genres, semantics and classroom education. *Linguistics and Education* 1.1.

Lemke, Jay A. (1990a) *Talking Science: language, learning and values* Norwood, N.J.: Ablex (Language and Educational Processes).

Lemke, Jay A. (1990b) Technical discourse and technocratic ideology. In Halliday, M.A.K., John Gibbons & Howard Nicholas (eds.), *Learning, Keeping and Using Language: selected papers from the Eighth World Congress of Applied Linguistics, Sydney 16-21 August 1987, Vol.2* Amsterdam: Benjamins.

Martin, J.R. (1988) Grammatical conspiracies in Tagalog: family, face and fate. In James D. Benson, Michael J. Cummings & William S. Greaves (eds.), *Linguistics in a Systemic Perspective* Amsterdam: Benjamins.

Martin, J.R. (1989) *Factual Writing: exploring and challenging social reality* Oxford: Oxford University Press.

Martin, J.R. (1990a) Literacy in science: learning to handle text as technology. In Frances Christie (ed.), *Literacy for a Changing World* Hawthorn, Vic.: Australian Council for Educational Research.

Martin, J.R. (1990b) Interpersonal grammatization: mood and modality in Tagalog. *Philippine Journal of Linguistics* 21.1.

Martin, J.R. (in press) Transitivity in Tagalog: a functional interpretation of case. In Margaret Berry, Christopher S. Butler & Robin P. Fawcett (eds.), *Meaning and Choice in Language, Vol. 2: Grammatical Structure* Norwood, N.J.: Ablex.

Matthiessen, Christian (1991) Language on language: the grammar of semiosis. *Social Semiotics* 1.2.

Matthiessen, Christian (1992) Interpreting the textual metafunction. In Martin Davies & Louise Ravelli (eds.), *Advances in Systemic Linguistics: recent theory and practice* London & New York: Pinter.

Matthiessen, Christian (in press) Register in the round: diversity in a unified theory of register analysis. In Mohsen Ghadessy (ed.), *Register Analysis* London & New York: Pinter.

Nesbitt, Christopher & Guenter Plum (1988) Probabilities in a systemic grammar: the clause complex in English. In Robin P. Fawcett & David J. Young (eds.), *New Developments in Systemic Linguistics, Vol. 2: theory and application* London & New York: Pinter.

New South Wales Disadvantaged Schools Program (1990) *Write it Right* Erskineville, N.S.W.: Department of Education and N.S.W. Education & Training Foundation.

O'Toole, Michael (1989) Semiotic systems in painting and poetry. In M. Falchikov, C. Poke & R. Russell (eds.), *A Festschrift for Dennis Ward* Nottingham: Astra Press .

O'Toole, Michael (in press) A systemic-functional semiotics of art. In Peter H. Fries & Michael J. Gregory (eds.), *Meaning and Choice in Language, Vol. 3: Discourse in Society* Norwood, N.J.: Ablex.

Painter, Clare (1984) *Into the Mother Tongue: a case study in early language development* London & Dover, N.H.: Pinter.

Pawley, Andrew (1985) On speech formulas and linguistic competence. *Lenguas Modernas* (Universidad de Chile) 12.

Phillips, Joy (1986) The development of modality and hypothetical meaning. *Working Papers 3* University of Sydney Linguistics Department.

Prigogine, Ilya & Isobel Stengers (1982) *Order Out of Chaos: man's new dialogue with nature* London: Heinemann [Fontana Paperbacks, 1985].

Rumsey, Alan (1990) Wording, meaning and linguistic ideology. *American Anthropologist* 92.2.

Schaffer, Simon (1991) Utopia Limited: on the end of science. *Strategies* 4/5.

Steiner, Erich (1988) The interaction of language and music as semiotic systems: the example of a folk ballad. In James D. Benson, Michael J. Cummings & Williams S. Greaves (eds.), *Linguistics in a Systemic Perspective* Amsterdam: Benjamins.

Thibault, Paul J. (1988) Knowing what you're told by the agony aunts: language function, gender difference and the structure of knowledge and belief in the personal columns. In David Birch & Michael O'Toole (eds.), *Functions of Style* London & New York: Pinter.

Thibault, Paul J. (1991) *Social Semiotics as Praxis: text, social meaning making and Nabokov's Ada*. Minneapolis: University of Minnesota Press.

Threadgold, Terry (1988) Stories of race and gender: an unbounded discourse. In David Birch & Michael O'Toole (eds.), *Functions of Style* London & New York: Pinter.

Threadgold, Terry et al. (eds.) (1986) *Semiotics - Ideology - Language* Sydney: Sydney Association for Studies in Society and Culture.

Threadgold, Terry & Anne Cranny-Francis (eds.) (1990) *Feminine/ Masculine and Representation* Sydney: Allen & Unwin.

Thwaite, Anne (1983) Sexism in three Mills & Boon Romances University of Sydney Department of Linguistics (B.A. Honours thesis).

Van Leeuwen, Theo (1988) Music and ideology: towards a sociosemantics of mass media music. *Working Papers 2* Sydney: Sydney Association for Studies in Society and Culture.

Van Leeuwen, Theo (1989) Changed times, changed tunes: music and ideology of the news. In John Tulloch & George Turner (eds.), *Australian Television: programmes, pleasures and politics* Sydney: Allen & Unwin.

III. LANGUAGE IN A CHANGING WORLD[1]

My 'text' for this occasion is taken from the first paper in Frances Christie's project report on *Teaching English Literacy*, in which Kevin McDonald is writing about 'the context of language education today.'[2] Referring to David Harvey's observation, in *The Condition of Postmodernity*, that 'the production city has been replaced by the city of the spectacle', McDonald goes on to say:

> Postmodern theories of the city emphasize flux, uncertainty, image - the city represented in Scott's *Bladerunner*. These latter theories emphasise the extent to which our environment is a symbolic one.

He goes on to say that one of the things that 'makes postmodernity different from the modernist movement' is

> . . . the insistence that social life is constituted essentially by the medium of language, rather than by the medium of energy and the transformation of nature. Thus the postmodern theorists join with many theorists who argue that our society is first and foremost a system of meanings, a symbolic reality. [pp. 4,5]

We might comment here that every society is 'a system of meanings, a symbolic reality'; there is nothing special about that. So it is the 'first and foremost' we should attend to. What makes our 'postmodern' society significantly more of a semiotic construction than societies in the past? It is not, I think, due to what Harvey describes as 'reconstituting the city as an artificial environment of leisure'. Replacing foundryland by Disneyland does not by itself change the relative balance between the material and the semiotic in human life; it was observed long ago that the technology of one era becomes the pastime of the next, whether hunting, or gardening, or riding around on steam trains, and if people in Los Angeles no longer produce material goods, people in Osaka and Shanghai certainly do. More to the point, perhaps, is that our culture is becoming trapped inside a kind of semiotic cycle, in which the environment that is **depicted** by the media is also one that is **created** by the media, so that if the semotechnology broke down all happening would come to an end. We become aware of this first as a feature of the leisure

industry, because it is obvious that most of the spectacle we see on television exists only as television spectacle; but that is because it is performance, and all performance, whether technology intervenes or not, enacts its own semiotic reality. A better source of insight here, I think, is the semiotic construction of the news. News, presumably, is a record of what people do. People are doing things all the time; it is when their doings are transformed into meanings that they become news. In his little book *The Tongues of Men*, written in 1937, Firth gave an account of what was news in England at the time, and commented:

> As we have seen, language can be regarded as operator, switchboard, and wiring in control of our social currents and power. It is the nervous system of our society. [p.131]

His 'Revue' provides some contemporary examples of the 'forces which language commands'.[3]

What sorts of 'doings' are typically transformed into news? On television, on radio, and in mass circulation print, there seem to be two dominant motifs: one is discourse, the other is death. Grammatically, most constitutents of 'news' texts are either projections - what somebody said; for example:

> 'I will not stand down', said a defiant Mr. Greiner.

or else material process clauses of the 'destruction' category, e.g.:

> Fourteen people were killed when a gunman opened fire in a Texas supermarket.

Very often one of these motifs is introduced as a subplot of the other: 'Killers threaten further reprisals . . .'. A third motif, a little way behind these two, is that of money: discourse, death and dollars, if we want to complete the 3-D trilogy. And then, of course, come sports, corrupt politicians, sex scandals of the rich and famous, and statistics of all kinds (it does not seem to matter what the statistics are about).[4] But the first two, discourse and death, seem to predominate: partly no doubt because they are catastrophic rather than gradual, but more because, of all the areas in the transitivity system, verbal processes, and processes of violent

conflict, are the most susceptible of ideological loading - not just lexically, but in their ideational and interpersonal grammar. It is much less easy to promote the capitalist values of individualism and enterprise, or to construe people into their archetypal roles, as hero, villain, victim, and so on, if the news consists of the community's recent artistic achievements or the seasonal migrations of birds.

We know this because it is precisely in the 'reporting' of pronouncements and speeches on the one hand, and of massacres, terrorist acts, and nuclear disasters on the other, that linguistic analysis most clearly reveals the opposing ideologies that are being promoted in different organs.[5] Construing events as news is a highly political act. But it is also more than that. If we are able to take the news as a way of exploring the concept of society as text, this is because constructing the news is not simply the semiotic transformation of verbal or material happenings; it is also the **instigation** of these happenings. There is no clear line, in fact, between construing events into meanings and bringing these events about. We can argue for a long time about the 'events' in Tiananmen Square three years ago and their construal/construction by the western media - about 'what happened' at all the various levels of agency. Whatever conclusion we reach (if any), our most powerful resource for investigating what happened will be an interpretation of grammar: a 'grammatics', which is a theory about how a grammar is, among other things, a theory of events.

There is no need to prolong this illustration; but let me refer to another salient aspect of the discursive society, namely its construction of history, or news from the past. An important function of the Bureau of Historiography in the imperial Chinese civil service was to legitimize each new dynasty by writing up the history of its predecessor - there is nothing specially twentieth century about such procedures! But again in our semiotically constituted society they are raised to new levels of symbolic construction, both in language and in other semiotic systems. This year is the 500th anniversary of the European invasion of the Americas. After months of spectacle, including a 'symbolic wedding, in Birmingham registry office, of Barcelona's Statue of Columbus with the Statue of Liberty', at which 'thousands of tiny eternity rings will be placed with a statue-sized perspex eternity ring, a video about Columbus' life showing in place of the gemstone', on 12th October the Columbus

Lighthouse will be inaugurated, in the Dominican Republic, and 'the Pope and all the Latin American and Caribbean Cardinals and Bishops will bless Columbus' reconstructed boats after their arrival from Spain'.[6] Meanwhile, from the same source, comes this news from South America:

> On 16 December 1991 twenty Paez Indians were machine-gunned and killed as they sat down to their evening meal, and another twenty were seriously wounded. The Indians were attacked by sixty men with their faces covered with camouflage grease and hoods. The killers tied their victims up, made them lie on the floor and opened fire. There have been no arrests. ...
>
> The Indians who were killed had settled there recently, on land given to them by an old lady sympathetic to their plight. It is thought that drugs dealers from the nearby city of Cali wanted to steal their land to grow opium poppies.

This was in Colombia. As the writer comments, 'Indigenous people of North and South America see little cause for celebration. ... An alternative programme of events has been organized to mark the anniversary, under the banner "500 Years of Resistance"'. The native Americans have their own semiotic device, reproduced below:

Symbol of the official celebrations of the 500th Anniversary

'Church, Death and Money' symbol used by South American protestors.

They know what makes (**them**) news; and their defence against being reduced to the status of a text in European history is to make the nature of that text explicit. Note that they employ this same 3-D motif: discourse (the church), dollars, and death.

The construction of news, and its projection in time (as history), serves to illustrate one interpretation of society as text: the postmodernist one whereby social processes are understood as competing and conflicting discourses, and the hierarchical divisions of class, race, sex and generation as competing and conflicting semiotic constructions of reality. This kind of discursivism is offered as a corrective to classical marxist explanations in terms of technology and relations of production. Like most reactions, it overreacts, overplaying the discursive at the expense of the material; whereas what we need to understand is the dialectic that is set up between the two. But my question here is, what are the implications for language itself, if it is true that in some sense language has gained even more control than Firth saw it had in 1937? Already, according to our grammatics, experience is construed in language and interpersonal relationships are enacted in language: what more can language achieve? - or rather, what more can people achieve with it? In asking the question we have already implied the direction in which to look for an answer: namely, that unless these various discourses are to fragment altogether (which is unlikely, although not inconceivable; we can see this tending to happen, with the growing gulf between specialist technical registers and the language of commonsense), new frames of consistency must evolve which will accommodate the contradictions and the tensions; not by covering them over, as dominant discourses tend to do, but by encompassing them within some higher order construct.

It may be objected that this sounds much too 'meta' - too much like constructing a more abstract scientific theory to accommodate conflicting models of the universe. But the grammar of a natural language **is** a model of the universe, in the sense that it functions (among other things) as a theory of human experience; and as language has evolved it has ongoingly reconstrued experience in line with, and as a part of, changes in the human condition. There is no reason to suppose that this evolution has come to an end, that our grammars are frozen in their present contingent states. On the contrary; it seems very clear that what we think of as

'modern English' is actually an assortment of many divergent components - a complex product of semantic creolization, in which conflicting models from different stages in our history (pre-settlement, agro-pastoral, iron age, scientific-technological) compete with and complement each other. When we understand cryptogrammar rather better than we do now, we may be able to sort out the various syndromes of features that construe these different dimensions of our experience.[7] By the same token, then, the grammar should be able to accommodate the variety of discourses that coexist in our postmodern societies - the 'diversity of identities that can communicate with each other', to quote McDonald again - not only the dominant discourse that has shaped our modern 'standard languages' but the other, opposed discourses that have hitherto tended to be excluded. To get a sense of this sort of thing in progress, we could look at the semantic reconstrual of the NVEs ('New Varieties of English') that is taking place around the world as English is steadily being remoulded to service the numerous non-European, non-'modern' cultures that are using it for their own semiotic needs.

I will come back to this point later. But first we might reflect that only those who have had the privilege of being modern can afford the luxury of being post-modern. To put this another way: you only begin to emphasize flux, uncertainty and chaos when your unmarked state has been an expectation of order. If we in ALAA take seriously our Australian protestations about being part of the Asia Pacific region, then we should remember that our neighbours in Japan, China and elsewhere take the modernist rather than the postmodernist view of things. This does not mean that they would have to reject the concept that society is founded on text; but they would mean by it something rather different. In their contexts, to suggest that modern culture is a construction of meanings, far from implying disillusionment with the technological society, would be heard as a celebration of what technology has achieved. In other words, modern (as opposed to postmodern) societies are still technology driven; but the technology itself has changed. It has become a technology of semiosis. The catchword is that of the 'information society': instead of using all our energies exchanging goods-&-services, we now engage primarily in exchanging information. Why? - because with advances in automation and robotics, machines take over production, and people spend their working time in meaning. Language is no longer

just a mode of **social** control; it is also the mode of control over physical systems and processes.

The immediate impact here is the technologizing of language itself. Here we have a direct line of evolution from the printing press to the computer, via the telephone, typewriter and tape recorder. But the pattern of this evolution is a helical one: while the invention of printing maximized the distance between spoken and written language, the one folksy, mobile and fleeting, the other high-tech, static and permanent, twentieth century technology has reversed the trend: speech can be immortalized on tape, writing scrolled ephemerally up the screen. Mixed modes engender mixed genres, as in electronic mail; and the writer's own control once more extends over the entire production of the written word, as we compose, revise, edit, print and publish our own outpourings of text. There is no need to predict the effect all this is going to have, because it's already there for us to see - although, having said this, I should add that the immediate effects are rather surfacy ones (the use of colloquialisms, for example) and the deeper impact is still to come, and will be the result not just of new text technology but also of more fundamental tendencies and changes.

Here is the Mayor of Osaka addressing his fellow citizens:[8]

> At the approach of the 21st century, Japan is becoming a great, information-oriented society of truly international character and cultural and economic diversity.
>
> At this significant time of changes, the citizens of Osaka feel that their city . . . must develop into a community making greater contributions to the world than ever before in a wider range of fields, embracing industry, economy and culture.
>
> To this end, the City of Osaka has been holding numerous discussions with experts from various circles and organizations, both academic and industrial, as to the most appropriate use of the vast space to be created in the coastal area of the city, the Hokko and Nanko districts. The ideas gleaned from these discussions have formed the conceptual basis of the Technoport Osaka project. In this new urban complex of the 21st century, four main functions will work in concert: information communication, advanced technology development, world trade, and culture, recreation and residence. . . .

> In order that we 20th century contemporaries may pass on a splendid urban asset to subsequent generations, I ask for your free opinions and constructive suggestions with regard to this project.

Now as we all know, the centre of a technoport is its teleport, where 'numerous information-related companies will be brought together around a new communications centre with optical fibre networks and a satellite communication base, to reinforce the information transmission capacity and thereby enhance Osaka's economic and cultural vitality'. The teleport will contain, among other things, a technological information centre, an overseas trade information centre, and a comprehensive distribution information system centre.

The teleport is a familiar enough concept to science fiction readers and computer freaks; but this one actually exists, as hub of the world-wide network of 'international information cities' that Osaka hopes to lead. The map in the city hall shows about a dozen cities around the world that would have the privilege of being part of this grand design - including one in Australia, thought of as Sydney, or perhaps a Sydney-Brisbane megalopolis. Here is the Australian vision of this same grand design, now transported to an Adelaide suburb called Gillman:[9]

> The eventual plan is to construct a small city, interspersed with commercial sites, educational centres, high-tech research facilities and all the Buck Rogers mumbo-jumbo we have been hearing about for the past few years. At least, the 'world university' and the bizarre plan to make Gillman an HDTV (high definition television) broadcasting centre to cover Asia appear to have bitten the dust.
>
> Just what it will actually look like remained even more of a mystery when the architect, Lionel Glendenning, gave an interview in which he was quoted as saying, 'It's going to be an urban city [sic], a set of villages, the sort of place where you can go around the corner to buy a cappuccino. It will be a slice of a city like Venice, Paris or parts of Sydney [with] people living above pastry shops. We have turned the project on its head. Now we are creating an urban experience that gives everybody the opportunity to gain access to the Arcadian dream.'
>
> Be that as it may, the only source of income (other than the taxpayer) the Multi Function Polis authority will have to actually

> build this dream is the sale of land - land on which houses and blocks of flats to accommodate a population of 40, 000 will be built (the polis), and land on which those beloved high-tech businesses will be established (the multi function). Unfortunately, a quick scribble on the back of an envelope illustrates a major flaw.
>
> It will cost a developer (if the MFP's figures are right, and at least one consultant has commented on the 'highly speculative' nature of some of their calculations) $600 million to develop this site - that's if the Government provides the land for nothing and charges nothing for the $250 million of services that will have to be put on. That comes to more than $1 million a hectare, or close to $100,000 for a standard building block.
>
> Now, this is Adelaide, remember, the capital of low-cost housing. A typical serviced block in a new outer suburb costs $15,000 to $20,000. You can get a two-bedroom apartment in a bayside suburb, or a nice little greenstone cottage in leafy Malvern for $100,000. For that, in Gillman, you get a bare block next door to a rubbish dump, gas pipeline, toxic bloom etc.

It is not hard to agree with Kevin McDonald when he says that 'There can be little doubt that we live in a culture where the theme of progress is exhausted'.

One might be tempted to say that anything with a name so inept as Multi Function Polis could not be expected to end up any other way than bogged down in an Adelaide swamp. It belongs with such triumphs of Japanese semiosis as Sweat (the name of a soft drink) and Creap (the powdered substitute for milk in coffee). In principle, of course, Japan's economic dominance is such that any Japanese innovation in English could be expected to catch on, whether in teleport or in supermarket or wherever (though there is one weakness, which may turn out to be critical: Japanese English has no basis in speech).

Whatever the nature and extent of the Japanese input, the language of the information society will be different, both ideationally and interpersonally: ideationally because it participates in new techniques of production, interpersonally because it participates in new relationships of power, or at least new manifestations of the power structure. What is much harder to predict is the outcome of the tensions between two conflicting pressures: (1) to be user-friendly, and hence a still not too

alienized variety of natural language, and (2) to be technology-controlled, and hence increasingly remote from what anyone would say or write.

At times of rapid historical change, we become aware of the power of symbols; and this is not surprising, because the symbols themselves have taken on an extra power - the changes are at once both material and semiotic, and cannot take place in one without the other. One question that then arises is: do we intervene? do we try to import some design into these essentially evolutionary processes?

The problem is, we do not know how to do it; and the recent history of language planning is not notably encouraging. I suspect it is subject to the operation of the law of the failed first try, or FFT as we might call it. This states that, when human beings intervene in any evolving system and start to introduce theory-based design, the first attempt always fails. I first observed this law at work in the context of applied linguistics, having noticed how, whenever a new theory-driven practice was introduced for the first time into language teaching, the result was disastrous; people then had to back off and think about it for a generation or so before coming back to the same idea with new understanding (and of course a new name). Two examples were the 'situational approach' and 'language for special purposes'. One might object that in neither of these cases was the underlying theory properly understood by those who first applied it - but that is precisely a part of the story of FFT. Meanwhile the 20th century has provided us with the textbook illustration of this principle for all time, in the failure of so-called communism. Here people tried for the first time to design history on a theoretical foundation; and we all know the result - the kind of peasant-dynastic state capitalism that went under the name of communism was a prototypical instance of FFT. No doubt we will have to wait at least a generation before the next attempt, which will not be called communism but something completely different, with a name perhaps taken from Tamil or Yoruba and certainly not 'post'-anything.

This is not to say that introducing design into evolving systems and processes (like language) can never succeed; it obviously can, and does, under the right conditions. But one absolute precondition is to understand the process one is intervening in. If we want to design grammar, then we need to understand how grammars work: that means having some theory of grammar, some explicit grammatics.

Now a theory, of any kind, is very like a grammar; it is a semiotic system, a system of meanings. This applies to theories in every field, physical, biological or social, as well as to theories of language; what is different about a linguistic theory is that it is a grammar about grammar (hence this term 'grammatics', just as language about language is called linguistics). Theories are interesting because they are in part instances of semiotic design: that is, they are systems of meanings that are explicitly deployed to carry out certain tasks. But theories are not, or only seldom, designed *in toto*. When we first move in to a new field of learning, we often have a sense of facing a solid, readymade, immutable edifice of theory, which will inevitably appear to us as if it had been designed as a whole, and will often seem arbitrary if not downright perverse. (I remember having this feeling when I started to study psychology, many years ago.) But although theories are 'grammars' which have been influenced by design - that is what distinguishes a technical theory from a principle that has evolved as common sense - they are not designed as a whole, in one massive burst of semiotic energy; and they are not usually constructed for their own sake, despite the appeal a mathematical theory may have as an object of elegance. Like natural language grammars, theories also evolve, bit by bit; they evolve in particular historical contexts, in pursuit of particular tasks; and they continue to evolve as long as the context persists and the tasks remain on the agenda.

By way of example, in the early 1950s a small group of linguists, in Britain, were constituted the Linguistics Group of the British Communist Party. They needed a general linguistic theory. On the one hand, the party was actively interested in national language policies in newly decolonizing societies; in questions of standard and dialect, of the development of technical and other functional varieties, of literacy in first and second languages, of script reform, especially in China, and so on. On the other hand, the search for a 'marxist linguistics' in the (then) Soviet Union had led to the famous linguistics controversy in Pravda in 1950; Stalin had just demolished Marr and Meščaninov, for 'telling fortunes in the teacup of the four elements', and restored comparative philology to the centre of the stage by requiring Soviet linguists to get on with their task of demonstrating the linguistic unity of the Slav nations.[10] In this particular context, or complex of contexts, we had to develop our own marxist linguistics. We never thought of this as creating

something new; on the contrary, we saw it as building on something already latent in the major European tradition. But we were also aware that it had to be a socially accountable linguistics, and this in two distinct though related senses: that it put **language** in its social context, and at the same time it put **linguistics** in its social context, as a mode of intervention in critical social practices.

It might be argued that, while these practices undoubtedly involve one in engaging with language, to do so does not require any abstract linguistic theory; such work can be done with an approach that is 'theory-free'. This always has a very seductive appeal: it gives the impression that one is being objective. Unfortunately, however, this impression is false. There is no such thing as theory-free engagement with language, whether one is actively intervening in the linguistic practices of a community or systematically describing the grammar of a particular language. The linguist who claims to be theory-free is like the conservative who claims to be non-political: they are both saying, to be impartial is to leave things as they are - only those who want to change them are taking sides.

Our party group was, of course, taking sides, trying to formulate linguistics which would (to put it in more modern-sounding terms) give value to the language of the 'other': non-European languages, unwritten vernaculars, non-native varieties of English, non-standard dialects, restricted codes and so on. The agenda was changing all the time; but this motif has remained constant, as the main ideological input to what evolved into systemic theory. The theory has never been neutral. It has also never stopped evolving. (One should not be misled into thinking that once something acquires a name it ceases to change!)

To say that a theory is not neutral does not mean that every metalinguistic activity is ideologically loaded or that all those who use the theory share a uniform political stance. A great deal of linguistic research is unconnected in any obvious way with any particular form of commitment, and if I want to study the syntax and morphology of Old Icelandic what I need is a powerful tool for the job. But these are not unrelated. You may be strongly committed, let us say, to working on the language of a small, threatened community as part of the effort to maintain their cultural identity; but to do this effectively, you need a comprehensive, cryptotypic account of its grammar - and hence, a

powerful tool for the job. Of course, much of what may seem at first sight to be 'pure' research is highly political activity - and may be conceived of by the researcher as such; the difference often lies in the time depth, whether the political goal is concrete and immediate or more abstract and still some distance off. In any case, engaging with language on these different levels puts increased pressure on theoretical resources, pressure to which a socially accountable theory has to respond.

So theories are grammars that evolve under pressure of work to be done, and the pressure is such that their evolution is tempered by design; they are so to speak semi-designed linguistic semiotics. But their design is that of the culture in which they operate, embodying its values, its styles of meaning, and the conflicts and tensions within it. Current frontier theories, whatever type of phenomenon they are concerned with, whether physical, biological, social or semiotic, partake in the prevailing mannerisms and preoccupations of the post-modern scene; so they tend to foreground chaos rather than order, the mixed rather than the pure, the cyclical rather than the linear, and communication rather than cause; and these features are then contextualized with reference to, and in opposition to, the modernist theories with their origins in order, boundedness, progress and cause-&-effect. Now grammars, that is the content systems of natural languages, could be said also to evolve under pressure, the pressure of historical processes; but this is a pressure of a different kind, because they are themselves part of these processes, not 'meta' to them - that is, they are not second-order grammars designed as theories to explain them. We usually take our own grammar, reasonably enough, for granted, and do not even reflect on it very deeply, let alone trying to intervene in it by design. Indeed our survival, as small children, depended on mastering the grammar to the point where we **could** take it for granted, rather than having to attend to it in all our doings. But we would assume, if ever we thought about it, that the grammar was not going to crack under the strain, whatever the particular demands we might come to make on it.

There have been moments in history when people have felt the need to design language (it is perhaps useful to talk of 'language design' instead of the more inclusive 'language planning', because most language planning is institutional rather than systemic). Perhaps the best known example in western history, certainly the history of English, is the attempt at designing a language of science in the sixteenth and seventeenth centuries. What is interesting about this, as I have pointed out

elsewhere,[11] is that while the design efforts centred on writing systems and, latterly, on vocabulary - constructing systematic taxonomies of written symbols and technical terms - these efforts had almost no effect on semiotic practice; whereas at the same time there was taking place a fairly massive restructuring of the grammar which none of those taking part in were even aware of. (There was a later spinoff from the concept of lexical design, as we see reflected today in biological and chemical terminologies.) The most striking contemporary example is the linguistic politics of feminism, which has shown that by forcing people to attend to symbolic inequalities in the grammar, and work on them, one can contribute to engineering social change; this lesson is now being applied to the linguistic deconstruction of other manifestations of 'otherhood'.

So what are the lessons here for us as applied (or 'applying') linguists? I tried to suggest in the paper I gave at the World Congress two years ago that the concept of doing applied linguistics means, among other things, that one is involved in the semiotic history of the culture. The point I was making there was that our dominant grammars lock us in to a framework of beliefs that may at one time, when they first evolved in language, have been functional, and beneficial to survival, but that have now become inimical to survival and harshly dysfunctional: the motifs of bigger and better (all 'growth' is positively loaded), of the uniqueness of the human species as lords of creation, the passivity of inanimate nature, the unboundedness of natural resources like water and air, and so on. These are not features of technical languages; they are aspects of our most unconscious, deeply installed, everyday commonsense grammar; and they are now very destructive, at a time when we have to learn to break the rhythm of endless growth, to identify ourselves with other species as part of a living whole, and to recognize that our planet is not a repository of infinite wealth and abundance. And I see this as an applied linguistic concern: to draw attention to these features of our daily language, its growthism and its lordism; and perhaps even to explore the possibility of design, though this will be forbiddingly hard to make succeed.

What then can be said about our technical languages? The most obvious feature of these is their insatiable demand for new words. If we put together all the technical dictionaries of English and counted the words in them, how many would we find? would we be approaching ten

million, perhaps? But words are grammatical constructions too; one can capture them in a dictionary, but one cannot really count them - what are significant, rather, are the resources available for constructing them. We now have nanotechnology, and that will no doubt engender another huge harvest of words. Their real impact is felt, however, through the rest of the grammar that goes with them. The technical discourse of modernism is this highly nominalized language by which, through a whole series of metaphorical processes in the grammar, our world of experience has been reconstrued, over the past few hundred years, as a world made up of things, abstract objects which act and react like the concrete entities in whose likeness they are semiotically moulded. Thus, for example, the discourse of information technology from Osaka again:

> The Comprehensive Distribution Information System, organically uniting inland, marine and air transportation systems, will provide efficient, highly reliable distribution information.

This language of 'events into things' was the major semiotic strategy for transforming technology into science. By the same token, it was a semiotic for capitalism, maintaining a clear distinction between 'those in the know' and the rest while turning the domains and components of knowledge into commodities. It leached into the discourse of administration and commerce (or perhaps even evolved there simultaneously?); and from both these sources, the technical and the bureaucratic, into the language of common sense, the everyday discourse of family and neighbourhood, where it has so far been contained by the barriers of age and class: age because it is impenetrable to children before a certain stage of semiotic maturation, and class because (since it was the gateway into knowledge and power) it remained, by and large, a middle class prerogative and preserve. And here these objectifying metaphors of experience conspire (in Martin's term) with metaphors of another kind, those in the interpersonal component of the grammar, by which are enacted middle class forms of the social relationship, patterns of implicit control, and personal rather than positional family role structures, so that the two together form the dominant discourse of capitalist culture.[12] As linguists we can observe and explain these phenomena; and we can track them through into the present late capitalist

period, noting the semiotic developments that underpin the information society, the cult of the consumer, the disneyfication of culture and so on.

Is there then a language of resistance? There are of course various kinds of partial anti-languages, like that used by players of computer games which provides a delightfully non-metaphorical oasis in the desert of documentation; here is a little specimen:[13]

1. When you wake up you should take the wood and go into the packing case and take the chandelier to invert the room. Go to the machine and push the button to make a copy of yourself and then exit the case and then take it. . . .
4. Once you have six possessions go back to the island to the near side and then throw six possessions. The tree then has no arms left so go under it. When you threaten to cut it down a wood nymph will appear and offer you an idol in return for its life. . . .
9. In the cavern room use the corpse as food for the jelly.
10. To go up the chimney you must wear the cold cream from the cupboard.
11. Use the potato to scare away the rat at the junction.
12. Use the nails and the hammer to close the coffin in the tower on the orc's nose.
13. Use the cracked pot in the cell to get some slime to trip up the goat on top of the statue so that you can get the horn.
17. When the Roc takes you to his nest squeeze the caterpillar to get the rope to escape. Keep the caterpillar as he is valuable.
18. The dwarf is important as she leads you to the ore that is very valuable.
19. Use the horn to scare away the advancing orc army when it arrives.
20. When you are out of the nest you can find a wisp that can be trapped in the miner's helmet and used instead of the wood. . . .
26. The flint that passes your nose will not be there if you get rid of the dragon. (This is in the six-exited room.)

The interesting point about this is that Steve Rambaron, who wrote it, is obviously a sophisticated user of computer software. Perhaps our technical discourse, while it must have its nominalizations in order to create systematic taxonomies, could nevertheless be nudged away from its obsession with pseudo-things, towards more democratic forms which lessen the semiotic distance - both the experiential distance, which makes the language of technical knowledge so remote from the experiences of everyday life, and the interpersonal distance, which separates those who

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have the knowledge from those who are left outside. I suggest that ALAA might explore the potential for a clause-based rather than a noun-based techno-grammar, as a contribution to post-modern, or better to post-postmodern, forms of educational discourse.

Meanwhile we have to enable people to control the discourses that now surround them, and the energies of applied linguists are very much taken up with language education work of this kind. In this field the Sydney-based programmes that have been developed in recent years by Jim Martin, first in collaboration with Joan Rothery and Frances Christie and subsequently with the participation of colleagues from many different institutions, stand out for their powerful exploitation of linguistic theory as a force for learning. For the past ten years and more, first in the primary school stage of children's writing development and more recently in secondary subject-based curricula and in language in the workplace, they have shown how a grammatics can open up access to the elaborated discourses of education and employment; and in doing so have enriched the theory in its turn.[14]

The environment of prevailing educational theory and practice within which language educators in Australia have to work is a difficult one, embodying beliefs and practices from different phases of capitalist ideology, and tending to look towards and copy the least appropriate models from elsewhere. As James Gee of the University of Southern California has pointed out in a recent book *The Social Mind*, current 'progressivist' education in the United States derives from a body of doctrine which locates all learning in the mental make-up of the individual, sets up a severe disjunction between cognitive and affective processes, and interprets cognition as a kind of information-processing phenomenon. This kind of exaggerated reaction against behaviourism (largely irrelevant to the rest of the world, where behaviourism never impinged) has, like all reactions, many of the features of what it is reacting against; and it embodies an extreme form of middle class ideology, with its rejection of 'knowing' in favour of 'speculating about' and its hidden curricula of values and educational goals. Like the authoritarian model which it sought to supplant, it is a-social and a-semiotic. It is interesting to wonder why, if educators are casting round for capitalist models from elsewhere, they do not look at the relatively successful ones (for example from Japan, since that country is now exalted as a model in every other respect), rather than one that is noteworthy for its general record of failure.

Let me mention here the work of three specialists in language education from overseas who will be taking part in our deliberations on this occasion. Professor Ronald Carter, from the University of Nottingham, is Co-ordinator of the LINC Project ('Language in the National Curriculum') in Britain. This is a teacher education project in which the primary focus is on language and explicit attention is paid to forms of discourse and principles of linguistic variation. These materials proved too rich for their governmental sponsors to digest; but this has not prevented them from circulating freely and effectively throughout the teaching profession. Professor Jay Lemke, of the City University of New York, in his major work on science education (which is appropriately called *Talking Science*), has provided a semiotic - that is, meaning-based - interpretation of the activities of doing, teaching and learning science, based on a penetrating analysis of the discourse of New York science classes. Professor Bernard Mohan, of the University of British Columbia in Canada, directs an important research and development project in Vancouver primary schools, where the linguistic makeup is comparable to schools we are familiar with in Sydney and Melbourne. His emphasis, as brought out in his book *Language and Content*, is on the development of writing as a multimodal experience, exploring how meanings are construed from a variety of semiotic resources. What runs through all their work is the principle that, if knowledge is construed in language, then those who want to open up access to such knowledge not only must themselves understand, but also must enable the learners to understand, how it is that language does its work - how the grammar of every language provides the power for interpreting and acting on the world.

There is no question that learners must have access to the dominant discourses of society; that is what education means. It would be a strange interpretation of social accountability to say that because you do not like these discourses you do not teach them to children and to migrants. This does not prevent you engaging in political action to change them. But there is another side to this, for applied linguistics: our accountability to those peoples who are not, and never have been, part of the culture to which these discourses belong. I referred earlier to the role of grammatics in the struggle to maintain, and give value to, the modes of meaning of the non-settlement cultures of native Americans and Australians. If it makes sense to say that 'our society is first and foremost a system of

meanings', then language must be at the centre of social change; and now is the time - and it will be the last time - when we can raise a more challenging question, asking not just how these semiotic modes may be preserved but how they may contribute to and become part of the collective human experience of the future. Are we so convinced of the rightness of our own ways of meaning - whether modern or post-modern - that we do not need to explore those of people that our culture has pushed aside? I am not talking here of some romantic, idealized conception of this or that individual or social group; nor on the other hand of the random, local linguistic variations that were the subject-matter of the old typologies of language. I mean the modes of understanding and of doing - of construing experience and enacting interpersonal relationships - that are located deep within the cryptogrammars of these 'other' languages. With due homage to Whorf, we still know very little of these; they may be different, in important ways, from our own; and it may well be in our own interest to try harder to understand them. There is no mystique about this; it is saying no more than that the dominant written cultures of Europe and Asia do not hold a monopoly of human wisdom. It would be a pity if their system of meanings was the only one to survive in a changing world.

NOTES

1 Opening keynote address to the 1992 Congress of the Applied Linguistics Association of Australia.

2 The full title of McDonald's paper is 'Cultural innovation and economic modernisation: the context of language education today'. It appears in Volume 2: Papers, of Frances Christie, ed., *Teaching English Literacy: a Project of National Significance on the preservice preparation of teachers for teaching English literacy*, Darwin, N.T.: Centre for Studies of Language in Education, 3 vols, 1991.

3 From J.R. Firth, *The Tongues of Men*, London: Watts, 1937. The 'Revue' chapter (chapter XI) includes the words: 'We live in an age of propaganda which everywhere encompasses us. It behoves us to study the language used for us and against us every day of our lives with that objective detachment and calm scrutiny which we are accustomed to give to the classics' [pp.132-3].

4 I first observed this many years ago when finding examples such as the following presented as news: 'Only one in nine of the inhabitants of Staffordshire owns a toothbrush'; 'One out of six of the population of

Glasgow was conceived in the cinema'. (How do they know?)

5 A classic study of this kind was Tony Trew's chapter "What the papers say': linguistic variation and ideological difference', in Roger Fowler et al., *Language and Control*, London: Routledge & Kegan Paul, 1979, pp.117-156.

6 See *Mazan Times: newsletter of the Rio Mazan Project*, 4.3, Spring 1992. (This is an Anglo-Ecuadorian project 'for forests and people of the Andes'; addresses 38-40 Exchange Street, Norwich NR2 1AX, England, and Casilla 844, Cuenca, Ecuador.) In the event, the Pope's visit was rescheduled.

7 Cf. the discussion in 'New ways of meaning' above. Perhaps the clearest example one could cite here is that of the complex of features brought together under the heading of 'experiential (or ideational) grammatical metaphor'; see M.A.K. Halliday & J.R. Martin, *Writing Science: literacy and discursive power*, London: Falmer, 1993; J.R. Martin, *English Text: system and structure*, Amsterdam: Benjamins, 1992, esp. chapters 5 & 6.

8 From *Technoport Osaka: information-oriented international urban complex of the 21st century*, published by City of Osaka Port and Harbor Bureau, no date (probably 1987).

9 See the feature article 'The $2 billion creature on a black lagoon' by Ben Hills in the Sydney Morning Herald's magazine *Good Weekend* of 27 June 1992.

10 See J.V. Stalin, 'Concerning marxism in linguistics', English version in *New Times* no.26, 28 June 1950. The original was in *Pravda* of June 20th. For a contemporary appraisal see J.O. Ellis & R.W. Davies, 'The Soviet linguistics controversy', in *Soviet Studies* (University of Glasgow) 3, 1951.

11 See Halliday & Martin, *Writing Science* (reference in n.6 above). For an account of the work in scientific language design, see Vivian Salmon, 'Language planning in seventeenth-century England: its context and aims', in C.E. Bazell et al., eds., *In Memory of J.R. Firth*, London: Longmans (Longmans Linguistics Library), 1966.

12 Identified by Bernstein in the early 1960s and named by him 'elaborated code' (see his two articles in *Language and Speech* 5, 1962).

13 From a popular British magazine for Atari users, of which I cannot now find the original source.

14 See for example numerous publications of the Metropolitan East Disadvantaged Schools Program, e.g. *Developing Critical Literacy*, *A Model for Literacy in Subject Learning*, *Teaching Factual Writing*, *Exploring Literacy in School Science* and other 'Write it Right' publications. These are available from DSP Centre Marketing, cnr. Bridge & Swanson Streets, Erskineville, NSW 2043.